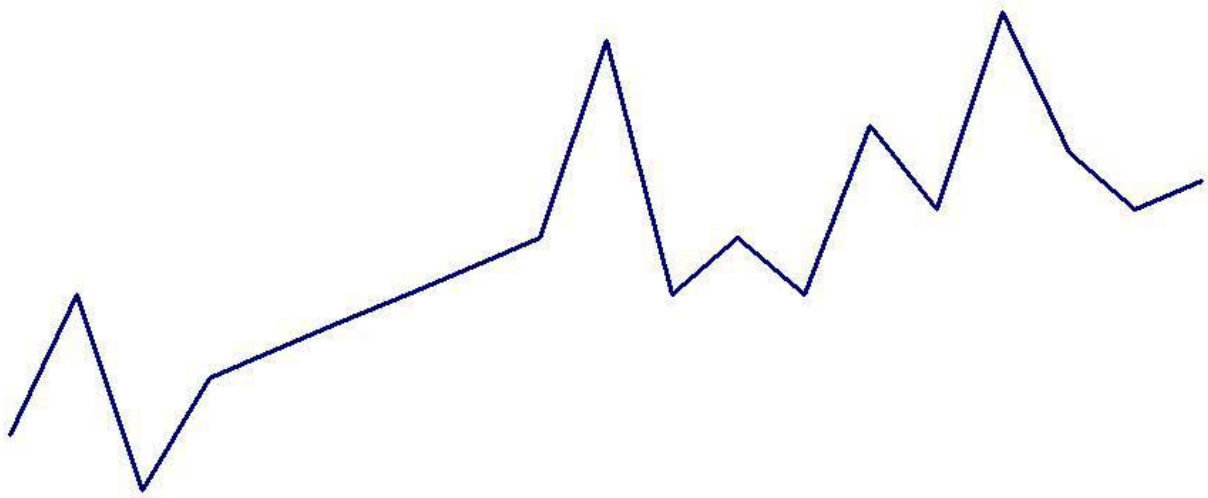


# **Behavior Risk Factor Surveillance System**

## **Report 1993-2000**



**Lincoln-Lancaster County Health Department**

*Lincoln, Nebraska*

# **Behavior Risk Factor Surveillance System**

**1993-2000**

Prepared by

**Lincoln-Lancaster County Health Department**

*Lincoln, Nebraska*

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# HONORABLE MAYOR'S COMMENTS



Unlike at the beginning of this century, chronic diseases are now our county's leading killers. Cardiovascular disease and cancer alone account for almost one-half of all deaths among Lancaster County residents. In many cases, the roots of chronic diseases are grounded in a limited number of health-damaging behaviors practiced by people every day for much of their lives.

The Behavior Risk Factor Surveillance System or BRFSS report published by the Lincoln-Lancaster County Health Department is a significant work which documents the impact of these behaviors on our health. Many of the chronic diseases are the direct result of our risky behaviors--behaviors that can be corrected or modified, which will ultimately lead us to a healthy life.

A critical part of effectively addressing the prevention of risky behaviors is the ability to accurately identify and measure these behaviors unique to our community. The BRFSS report provides us with this important assessment information. The information contained in this report is used to monitor the prevalence of numerous unhealthy behaviors, plan prevention efforts, and evaluate the effectiveness of prevention efforts.

Along with the Lincoln-Lancaster County Board of Health, I would like to commend the Lincoln-Lancaster County Health Department for producing this outstanding report.

**Don Wesely**  
Mayor of Lincoln

# HEALTH DIRECTOR'S COMMENTS



The Lincoln-Lancaster County Health Department (LLCHD) is pleased to present the Behavior Risk Factor Surveillance System (BRFSS) report to the community. The report is based on data collected between 1993 and 2000. The BRFSS is designed to estimate the prevalence of at risk personal behaviors which are responsible for major causes of disease and disability. For example, cigarette smoking alone is attributed to 14 percent of deaths in Lancaster County each year.

Each year we collect information on a wide range of behaviors that affect our health. Our focus has been on the following behaviors, which are linked with heart disease, cancer, stroke and diabetes, Lancaster County's leading killers:

- Physical inactivity
- High fat, low-fiber diet
- Preventive medical care to save life (for example, mammogram, pap smear, colorectal cancer screening and influenza shots)

This report contains in-depth information about these and other harmful behaviors---how common they are, whether they are increasing over time, and which people might be most at risk. The LLCHD is committed to reducing and erasing the prevalence of these risky behaviors in our population. If you have any questions or comments about this report, please call 402/441-8000.

**Bruce D. Dart, MS**  
Health Director

## Acknowledgements

The Lincoln-Lancaster County Health Department (LLCHD) would like to express its gratitude to the Data Management Section of the Nebraska Health & Human Services System (NHHSS) for providing the BRFSS data. The LLCHD would also like to thank the Office of Strategic Management Services staff of the NHHSS for their technical assistance in data analysis.

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## **Introduction**

The Behavior Risk Factor Surveillance System (BRFSS) is an ongoing surveillance program developed and partially funded by the Centers for Disease Control and Prevention (CDC). It is designed to estimate the prevalence of health risk factors for the major causes of death and disability in the United States, many of which are behavioral in nature. The BRFSS surveys have been conducted on a continuous basis since the early 1980s to determine the proportion of residents who engage in health behaviors that increase the probability of negative health outcomes. They provide state specific estimates of the proportion of adults aged 18 years and over for reporting health risk behaviors. These behavioral risk factor prevalence data provide a tool for evaluating health trends. They also helps assess the risk of chronic disease, and, they play a vital role in developing public policy and monitoring achievement of public health goals, such as Healthy People 2010.

Nebraska was one of the 29 states that participated in the BRFSS survey since the beginning. The Nebraska Health and Human Services System (NHHSS) is responsible for conducting the Behavior Risk Factor Survey for the entire state. Lincoln-Lancaster County Health Department has contracted with the NHHSS to conduct a separate Behavior Risk Factor Survey for Lancaster County. Our BRFSS follows the same protocol and methodology as designed by the CDC and adopted by the State of Nebraska.

The findings of this report stem from the results of the interviews conducted between 1993 and 2000. This report addresses major health risk factors, (such as smoking, alcohol consumption and physical inactivity), as well as preventive health behaviors, (such as receiving immunizations and cancer screening), health status, prevalence of diabetes, and health care issues, such as health insurance coverage. Additionally, this report summarizes trends in risk behavior over time.

## **Methodology**

### *A. Sampling Design*

Lancaster County BRFSS is a random sample telephone survey. Respondents were selected using random digit dialing from residential telephone exchanges in Lancaster County. When a residence has been contacted, one adult (18 years of age or older) is randomly selected to be interviewed from all adults residing in the household and is then interviewed in accordance with BRFSS protocol. Lancaster County Survey samples for 1993 to 1998 were pulled from Nebraska State BRFSS for these years because. Surveys from 1993 to 1995 and 1996 to 1998 were then combined to generate an adequate sample to overcome any problems associated with small sample size. However surveys for 1999 and 2000 were conducted specifically for Lancaster County with inadequate sample size and were analyzed separately. Telephone surveys with 4161 randomly selected Lancaster residents age 18 and older were conducted during 1993 to 2000.

## *B. Survey Instrument*

The questionnaire is divided into three sections. The first section, or the core section, contains questions on health risk behavior; the second section contains demographic information; and the third contains optional modules. Although most of the core questions and demographic information were the same between years, optional modules varied from year to year.

### **Weighting of Data**

Weighting is the procedure to correct the distributions in the sample data to approximate those of the population from which it is drawn. This is partly a matter of expansion and partly a matter of correction or adjustment for both non-response and non-coverage. It serves the purpose of providing data that look like the population rather than like the sample.

Weighting of BRFSS data, improves precision of prevalence estimates by performing three functions: it equalizes probability of being selected for the survey; it corrects for variation in age, race, sex groups between the sample and the population; and it permits generalization of the survey data to the entire population. BRFSS survey data collected from the respondents are initially unweighted data.

Because Lancaster County BRFSS employs a random digit dialed telephone survey, data were weighted to account for differences in the probability of selection. The number of different telephone numbers that reach each household and the number of adults in each household were considered in the weighting process. The rationale for weighting for number of phones comes from the fact that it is the telephone numbers that was sampled whereas statements are made about the people. Since each phone number within a stratum has equal probability of selection, the probability that a household will be called is proportional to the number of residential phones in the household. After adjusting the raw data to these three factors, the data were adjusted further using the Lancaster County age and sex group distribution so that the weighted sample data produce demographic distributions that correspond closely to the County population.

### **Data Analysis**

After weighting the collected data for each year, surveys conducted though 1993-1995 and 1996-1998 were merged to generate two data sets for analysis. Surveys conducted in 1999 and 2000 were analyzed separately after weighting. All data analysis was performed using SPSS (ver10).

This report presents the percentage of high-risk behavior within each demographic group. The demographic variables used to analyze the survey data and presented in this report include sex, age group, education, household income, and race.

### **Survey Limitations**

The BRFSS survey relies on self-reported data and has certain limitations. These limitations, therefore, should be understood in the interpretation of the data. Respondents might under-report some behaviors that may be considered socially unacceptable, unhealthy, or even illegal. Conversely, respondents might over-report desirable behaviors. Respondents might not recall past behaviors and fail to respond to a question accurately. A question may not mean the same thing to different respondents, and some respondents may not respond at all.

The BRFSS survey excludes households without telephones and does not attempt to contact institutionalized people at all, which might result in selection bias due to under-representation of certain segments of the population. The possibility that people not interviewed for this reason also lent considerable bias to the survey sample.

Additionally, breaking down the data into smaller categories (such as demographic groups) decreased the sample size of the original risk factor categories, thereby decreasing the ability to determine statistically significant differences. Finally, it should be noted that weighting the data by age and sex distribution was done in order to correct for over- or under-representation of all groups. Prevalence based on denominators of less than fifty respondents was considered statistically unreliable.

## **Executive Summary of Results**

### ***Health Status***

- In 2000, 90.5 percent (95% CI, 89% - 92%) of the Lancaster residents considered their overall general health from good to excellent. However, 9.5 percent (95% CI, 8%-11%) in the same year rated their general health as fair or poor. The trend in the proportion of respondents who rated good to excellent health remained about the same in the past seven years.
- An average of 2.7 days (95% CI, 2.29 - 3.03) in the previous month, the respondents felt their physical health was not good. Respondents also reported an average of two days (95% CI, 1.69-2.31) in the past month prior to the survey that they did not have good mental health.
- Poor physical and mental health restricted participation in their day-to-day activities on an average of 3 days (95% CI, 2.6 - 3.6) in the month prior to the survey.

### ***Access to Health Care***

- At the time of survey, 8.8 percent (95% CI, 2.3% - 10.3%) of adult Lancaster residents reported not having any kind of health care coverage. The proportion of uninsured residents remained stable since 1996.
- Five percent (95% CI, 3.8% - 6.2%) of respondents reported that they could not see a doctor in the past twelve months when they needed to because of the potential cost of care.
- Countywide in 2000, an estimated 81.4 percent (95% CI, 79.3% - 83.5%) of Lancaster adults had received a routine checkup within the past two years.

### ***Cigarette Smoking***

- Out of Lancaster residents aged 18 years and older, 39.7 percent (95% CI, 37.12% - 42.28%) had smoked at least 100 cigarettes in their entire life. The prevalence rate of current smokers was 22.4 percent in 1993-1995, 23 percent in 1996-1998 and 24 percent in 1999. Respondents of current-smoker category smoked an average of 16 cigarettes (95% CI, 15 -17) a day.
- In 1993-1995 and 1996-1998, 7.5 percent (95% CI, 4.5% - 10.5%) and 3.6 percent (95% CI, 2% - 5.2%) of the Lancaster adults reported smokeless tobacco use respectively.

### ***Alcohol***

- Self-reported problems with alcohol drinking have declined in Lancaster County. In 1999, 18.6 percent (95% CI, 16.2% - 21%) of adults reported “binge drinking,” which was lower than the rates for 1993-1995 (22.9%) and 1996-1998 (22.6%). More men than women engage in binge drinking across the survey years (31.90% versus 12.6 percent in 1993-1995, 29.6 percent versus 15.7 percent in 1996-1998, and 25.5% versus 11.3 percent in 1999).

- In 1999, 4.8 percent (95% CI, 3.4%- 6.2%) BRFSS adults reported chronic heavy drinking, and 4.9 percent (95% CI, 3.5% - 6.3%) acknowledged driving after too much drinking during the past month.

### ***High Blood Pressure***

- The prevalence of hypertension among adults has not changed significantly in Lancaster County since 1993. Approximately 19 percent (95% CI, 16.5%-21.5%) of respondents in 1999 reported that they had been told that they had high blood pressure.
- In 1999, 4.7 percent (95% CI, 3.4%- 6%) of respondents had not had their blood pressure checked in the past two years, indicating an approximate 3 percent drop in the overall prevalence from 1993-1995 (7.9%).

### ***Blood Cholesterol Level***

- High blood cholesterol, like hypertension, is a self-modifiable risk factor for cardiovascular disease. In 1999, six of every ten adults (64.20 %, 95% CI, 61.2% - 67.2%) had ever had their cholesterol checked, and 90.7 percent (95% CI, 88.5% - 92.9%) of those who ever had it tested had their cholesterol checked within the past five years.
- Among those tested, 22.1 percent (95% CI, 19.1% - 25.1%) were told by a health professional that their blood cholesterol was high. Prevalence of high blood cholesterol level in adults has declined considerably in Lancaster County since 1993 (30 % in 1993-1995 versus 22.1 % in 1999).

### ***Diabetes***

- In 2000, 4.2 percent (95% CI, 3.2%-5.2%) of the respondents identified themselves as diabetic. Women with gestational diabetes were not included in the analysis. The rate remained fairly stable over the years (4.6% in 1993-1995, 5% in 1996-1998 and 4.2% in 1999).

### ***Immunization***

- Immunization is one of the essential elements of preventive care. This is especially true for the elderly. Influenza shots are recommended annually for people over 65 and for those with chronic diseases. Among adults aged 65 years and older, 70 Percent (95% CI, 65% - 75%) had a flu shots in the year 2000. The prevalence of flu shots among the same age group was 67.40 percent in 1993-1995, 71.6 percent in 1996-1998 and 71percent in 1999 -- indicating stable vaccination coverage.
- The proportion of Lancaster County residents of age 65 years and older who received pneumonia vaccinations almost doubled from 1993-1995 to 2000 (28.9% to 58% in 2000, 95% CI, 52.56% - 63.43%).

### ***Colorectal Cancer Screening***

- The American Cancer Society recommends a digital rectal exam annually after age 40, a fecal occult blood test annually after age 50, and proctoscopy every 3-5 years after age 50. Forty percent (95% CI, 35.1% - 44.9%) of Lancaster adults aged 50 or more indicated in the 1999 survey that they had ever had a sigmoidoscopy or a colonoscopy. This rate was consistent over the past seven years (42.4% in 1993-1995 and 38.9% in 1996-1998) for the same age group.
- Among respondents of the same age group, 47.1 percent (95% CI, 42.07% - 52.12%) in 1999 and 37 percent in 1996-1998 reported ever having a blood stool test using a home kit.

### ***Women's Health***

- The proportion of women aged 40 years and over who ever had a mammogram has increased gradually from 79 percent in 1993-1995 to 84.1 percent in 2000 (95% CI, 80.9% - 87.3%). More than 87 percent (95% CI, 84.6% - 90.6%) of the respondents of the same age group reported in 2000 that they had had a mammogram within the past two years.
- Eight out of every ten (81.7 %, 95% CI, 79% - 84.4%) adult women, aged 18 and beyond, have ever had a clinical breast exam (CBE). The prevalence of ever having a CEB appeared to have declined slightly in 2000 after remaining somewhat stable over the previous seven years. Among women who had these exams, 91.7 percent (95% CI, 89.6% - 93.8%) reported to have it done with in the past two years.
- Most women aged 18 and over (85.9 %, 95% CI, 83.5% - 88.3%) informed that they had a Pap smear test, and 87.5 percent (95% CI, 85% - 90%) had the test with in the past two years.

### ***AIDS/HIV knowledge/ Attitude***

- The majority of the Lancaster County residents (aged 18 to 64) would encourage their sexually active teenager to use a condom (84 % in 2000, 95% CI, 81.8% - 84.02%). The proportion of respondents who would encourage condom use remained fairly stable since 1993 (87% in 1993-1995, 85.9% in 1996-1998 and 83.8% in 1999).
- In 2000, 75.7 percent (95% CI, 73.1% - 78.3%) of respondents believed that if they had a school-going children, he or she should begin receiving education on HIV infection and AIDS at or below the 6<sup>th</sup> grade level.
- Three out of ten BRFSS respondents in the County (29.10%, 95% CI, 26.4% - 31.8%) aged 18 to 64 said their blood had been tested for HIV infection. Nearly 24% (23.8 percent) of these respondents had the test just to find out if they were infected; 13.6 percent had it done for routine check-up. In the majority of these cases (43.6%), private doctor's offices were the sites performing the most recent HIV blood test.
- In 2000, when asked about their perception of contracting HIV infection, 4.8 percent of the same respondent group indicated their risk as "high" or "medium."

### ***Overweight***

- The proportion of overweight persons has increased substantially during the past seven years in Lancaster County. Based on self-reported weight and height, 39.5 percent (95% CI, 36.9% - 42.1%) of the BRFSS respondents were categorized as overweight in 2000 which depicts a demonstrable upward trend since 1993-1995 (33.5%).

### ***Weight control***

- Although U.S. consumers spend more and more money each year for weight loss products and services, the number of overweight and obese individuals continues to rise. One-third (33.4%, 95% CI, 30.9% - 35.9%) of Lancaster adults at the time of the survey in 2000 reported that they were trying to lose weight. Rates have not changed significantly from the reports of previous years (36 % in 1993-1995, 33.7% in 1996-1998).
- Overall, 38.3 percent (95% CI, 35%-41.6%) of adults in 2000 were eating fewer calories and lower fat meals in order to lose or maintain their weight.

### ***Physical Activity Levels***

- Approximately 30 percent (29.8%, 95% CI, 27.4% - 32.2%) of adults surveyed in 2000 stated they had not participated in any kind of physical activity during the past month. An upward trend was observed in physical inactivity among the Lancaster residents from 1996 to 1998.
- Among those who reported having physical activity, one-third reported that they spent most of their time walking during the past month as their physical activity or exercise whereas 6.9 percent spent time running and two percent jogging.

### ***Fruits and Vegetable consumption***

- The prevalence of people consuming 5 or more servings of fruits and vegetable a day in the Lancaster County increased from 20 percent (95% CI, 15% - 25%) in 1993-1995 to 30.7 percent (95% CI, 28.3% - 33.1%) in 2000.

Table I: Survey Sample Size by Demographic Characteristics

<b>Survey Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Total Sample size</b>	751	1037	955	1379
<b>Gender</b>				
Male	309	410	372	598
Female	442	627	583	781
<b>Race/Ethnicity</b>				
White	712	981	898	1290
Non-White	37	51	50	77
<b>Age in Years</b>				
18-24	100	136	107	172
25-34	179	203	193	253
35-44	162	222	184	266
45-54	111	175	155	233
55-64	67	88	103	138
65-74	73	108	107	169
75+	59	105	106	148
<b>Education</b>				
Some HS or Less	50	56	52	54
HS Grad or GED	226	312	260	468
Some College	227	328	308	410
College Grad	247	338	331	440
<b>Annual Household Income</b>				
Less than \$10,000	74	53	47	46
\$10,000 - \$15,000	69	68	43	49
\$15,000 - \$20,000	77	92	71	78
\$20,000 - \$25,000	65	110	77	125
\$25,000 - \$35,000	121	134	126	198
\$35,000 - \$50,000	127	217	138	213
\$50,000 +	144	223	253	340

\* Excludes "Don't know", "Refused"

Table II: Survey Sample size by year and sample percentage by  
Demographic variable\*

<b>Survey Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Total number of Sample size</b>	751	1037	955	1379
<b>Gender</b>				
Male	52.5	51.7	51.5	49.6
Female	47.5	48.3	48.5	50.4
<b>Race/Ethnicity</b>				
White	94.4	94.2	94.1	94.5
Non-White	5.1	5.8	5.9	5.5
<b>Age in Years</b>				
18-24	21	21.3	21.8	20.2
25-34	23.6	22.1	21.2	20
35-44	19.4	20	20.2	19.8
45-54	12.4	13.3	13.6	17.1
55-64	9.4	9.2	9.3	9.3
65-74	7	6.8	6.7	7
75+	7.2	7.2	7.3	6.7
<b>Education</b>				
Some HS or Less	6.7	5.1	5.2	3.5
HS Grade or GED	28.8	27.7	26.5	33
Some College	32.7	35	33.6	32
College Grade	31.8	32.1	34.4	31.6
<b>Annual Household Income</b>				
Less than \$10,000	9.7	5.2	5.4	3.6
\$10,000 - \$15,000	8.5	6.3	4.1	4.7
\$15,000 - \$20,000	9.7	8.1	7.1	6.1
\$20,000 - \$25,000	7.9	9.8	8.2	10.5
\$25,000 - \$35,000	15.5	13.3	13.9	17.4
\$35,000 - \$50,000	17.6	21.2	15.3	21.1
\$50,000+	16.3	22.4	23	28.6

\* Weighted percentage of total sample.

## **General Description of Survey Questions**

### **Health Status**

General self-rated health and number of days during the preceding 30 days when physical health was not good, mental health was not good, and usual activities were limited.

### **AIDS Knowledge/Attitudes**

Chances of getting HIV: Respondents aged 18-64 who believe that their chances of getting infected with HIV, the virus that causes AIDS, are medium or high.

Encourage Teen Condom Use: Respondents aged 18-64 who would encourage their sexually active teenagers to use a condom.

HIV Blood Test: Respondents aged 18-64 who ever had a blood test for HIV infection.

### **Women's Health**

Ever had a Mammogram and a Clinical Breast Exam: Female respondents, aged 40 and older, who reported that they have ever had a mammogram (an X-ray of each breast to look for breast cancer) or a clinical breast exam (defined as an examination during which a doctor, nurse, or other medical professional felt the breast for lumps).

Mammogram and Clinical Breast Exam within the Last 2 Years: Women who reported that they have ever had a mammogram or clinical breast examination were asked how long it had been since their last examination.

Ever had a Pap smear: Female respondents who have not had a hysterectomy, age 18 and older, who reported that they have ever had a Pap smear (A test for cancer of the cervix).

How Long Since Last Pap smear: Female respondents who reported that they have ever had a Pap smear and who then reported the time of their last Pap smear test. Those who report they have never had a Pap smear are included and recorded as "never". This data only includes women who have not had a hysterectomy.

### **Cholesterol**

Respondents who were asked whether they have ever had their cholesterol levels checked and, if so, whether they were told their cholesterol was high. They were also asked about the time since they had their blood cholesterol checked.

### **Diabetes**

Diabetes Awareness: Respondents who reported that a doctor ever told them that they have diabetes.

### **Alcohol Misuse**

Acute (Binge) Drinking: Respondents who reported having five or more alcoholic drinks, on an occasion, one or more times in the past month.

Chronic Drinking: Respondents who reported an average of two or more drinks per day i.e., 60 or more alcohol drinks a month. Chronic drinking status is based on the total number of drinks per month.

Drinking and Driving: Respondents who reported driving after having too much to drink, one or more times in the past month.

### **Fruits and Vegetables**

Five or more servings of fruits and vegetables: Responses to questions on fruit and vegetable consumption were summarized to arrive at the number of times per day each respondent eats fruits and vegetables.

### **Health Care Coverage**

No Health Care Coverage: Respondents who responded "No" to the question, "Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs or government plans such as Medicare?"

### **Hypertension**

Hypertension Screening: Respondents who reported that they have had their blood pressure checked within the past 2 years.

Hypertension Awareness: Respondents who reported that they have ever been told they have high blood pressure.

### **Immunization**

Flu Shot: Respondents age 65 and older who reported that they had a flu shot within the past 12 months.

Pneumonia Vaccination: Respondents age 65 and older who have ever had a pneumonia vaccination.

### **Overweight**

Overweight according to BMI (Body Mass Index): According to the National Heart, Lung and Blood Institute (NHLBI) of the National Institutes of Health (NIH) clinical guidelines BMI values of 25 to 29.9999 are designated as "over weight" and BMI values of more than 30 is considered as obese. BMI values are measured by self reported weight and height of the BRFSS respondents.

### **Physical Inactivity**

Physically Inactive: Respondents who reported that they did not participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise.

**Smokeless Tobacco**

Current Smokeless Tobacco User: Respondents who reported that they currently use smokeless tobacco such as chewing or snuffing tobacco.

**Smoking Status**

Smoker: Respondents who have ever smoked 100 cigarettes in their lifetime and smoke now.

Current Daily Smoker: Respondents who reported smoking at least 100 cigarettes in their lifetime, currently smoke, and smoked all of the past 30 days.

**Colorectal Cancer Screening**

Ever had a sigmoidoscopic/proctoscopic exam: Respondents who answered yes to the question, “A sigmoidoscopy or proctoscopy is when the a tube is inserted in the rectum to view the bowel for signs of cancer and other health problems. Have you ever had this exam?”

Ever had a blood stool test: Respondents who answered yes to the question, “A blood stool test is a test that may use a special kit at home to determine whether the stool contains blood. Have you ever had this test using a home kit?”

**Weight Control**

Respondent who answered “yes” to the question, “Are you trying to lose weight?”

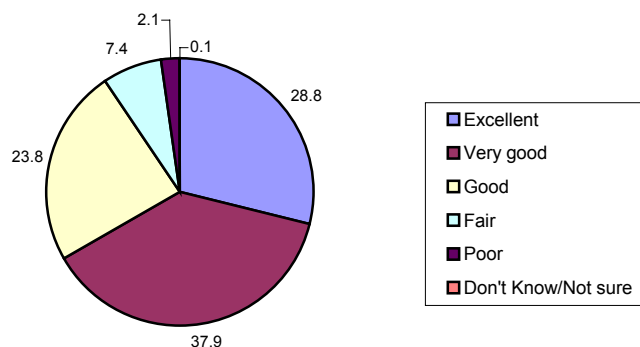
## Health-Related Quality-of -Life

To evaluate the outcomes of interventions and the need for health services, questions regarding general health-related quality of life were asked. These questions try to identify how individuals perceive their own health by describing how well they function physically, mentally, and socially during their day to day activities. These questions are important in that they can indicate dysfunction and disability not measured in standard morbidity and mortality data. Participants were asked: 1) whether their health was generally excellent, very good, fair, or poor; 2) how many days during the previous 30 days their physical health was not good because injury or illness; 3) how many days during the previous 30 days their mental health was not good because of stress, depression, or problems with emotions; and 4) how many days during the previous 30 days their physical and mental health prevented them from performing usual activities, such as self care, work, or recreation. Respondents who reported “Fair” or “Poor” to the question are considered at risk.

### General health

Overall, 90.5 percent (95% CI, 89%-92%) of the adult population in Lancaster County reported themselves to be in excellent to good health in the 2000 survey. Of these, 28.8 percent (95% CI, 26.4%-31.2%) said it was “excellent,” 37.9 percent (95% CI, 35.3%-40.4%) expressed “very good,” 23.8 percent (95% CI, 21.6%- 26%) mentioned “good,” and 9.5 percent (95% CI, 8%-11%) reported “ fair” or “poor” (Fig.1).

**Fig.1: Self-Reported Health Status**

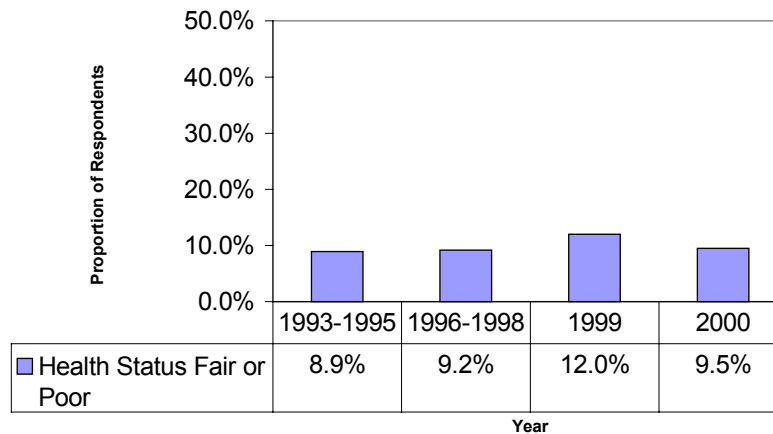


### Prevalence and Trend

Respondents reporting their health status from “good” to “excellent” have not changed significantly from the previous surveys (Table 1). However, respondents rating their health as fair or poor showed a fluctuating trend over time (Fig.2).

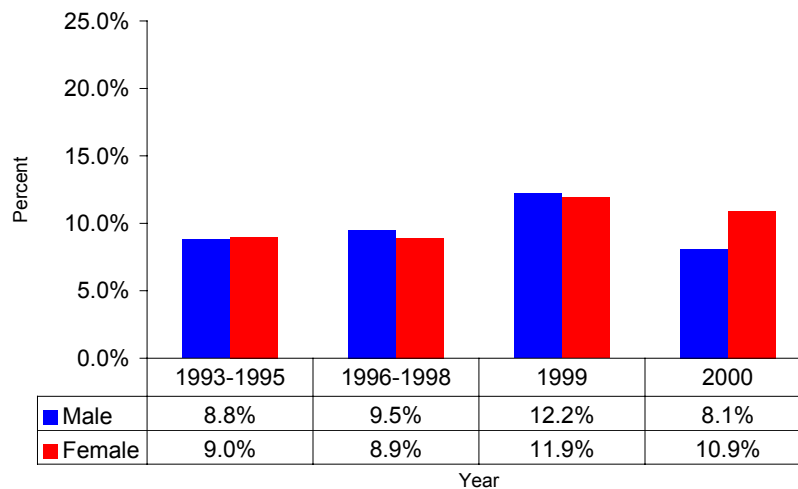
<b>Table 1: Self Reported Health Status</b>				
	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
Excellent	26.4%	24.7%	21.9%	28.8%
Very good	40.6%	38.9%	37.5%	37.9%
Good	24.0%	26.9%	28.1%	23.8%
Fair	6.8%	7.2%	9.4%	7.4%
Poor	2.1%	2%	2.6%	2.1%
Don't Know/Not sure	0.2%	0.2%	0.5%	0.1%

**Fig. 2: Trend in Health Status Fair or Poor**



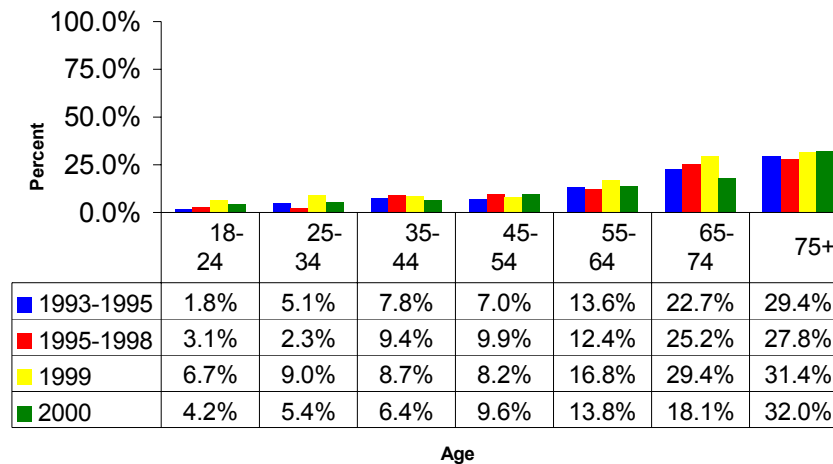
The response rate indicating fair or poor health did not vary much by respondent's gender (Fig.3a). Approximately eight percent of men and 11 percent of women considered their health status as fair or poor in 2000. The proportion of respondents reporting fair or poor

**Fig.3a: Self Reported Health Status "Fair or Poor" by Gender**



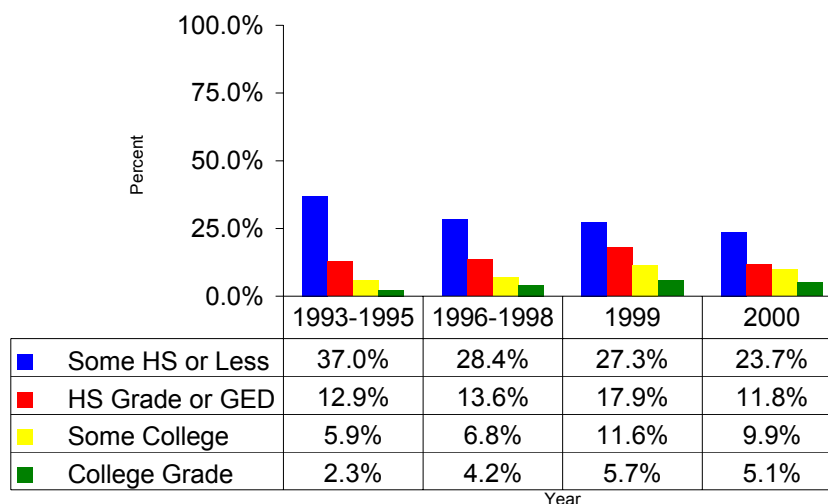
health increased with advancing age (Fig.3b). In 2000, only 4.2 percent of adults aged 18-24 years stated their health was fair or poor; in contrast 18 percent of adults of aged 65-75 and nearly one-third of adults (32%) aged 75 years and older reported their health status was fair or poor.

**Fig.3b: Proportion of Respondent Reported 'Fair' or 'Poor' Health by Age Group**

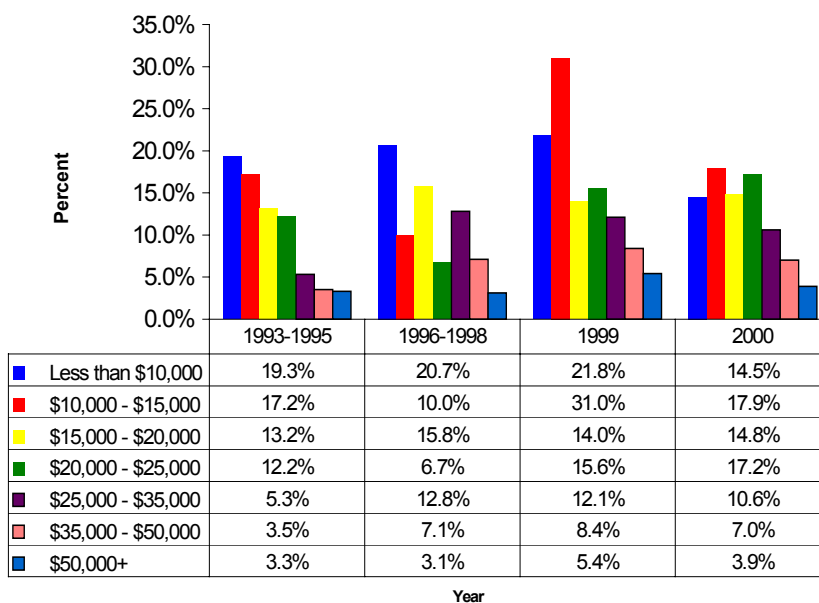


A similar pattern of response was observed in respondents with different levels of household income and education. The prevalence of “fair or poor” health status decreased as the level of education or income increased (Fig.4a, 4b). Five percent of adult respondents completing college grade and 2.1 percent with income of \$75,000 or more rated their health status “fair or poor” compared to 23.7 percent of adults with an education level of high school or less, and 14.5 percent of adults with annual income of less than \$10,000.

**Fig.4a: Health Status "Fair or Poor" by Education Level**

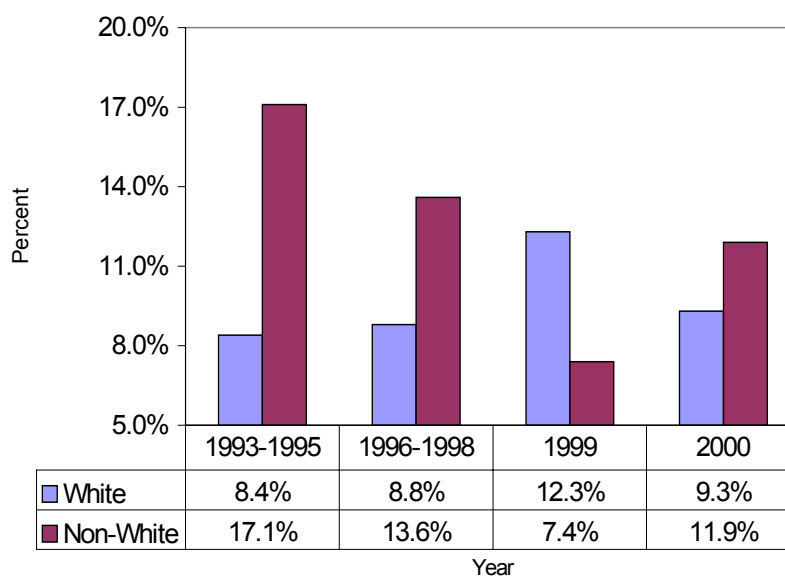


**Fig.4b: Health Status "Fair or Poor" by Income**



A higher Proportion of non-white (11.9%) respondents considered their health status to be fair or poor than white respondents (9.3%). All survey intervals except the 1999 survey showed a similar trend (Fig.5).

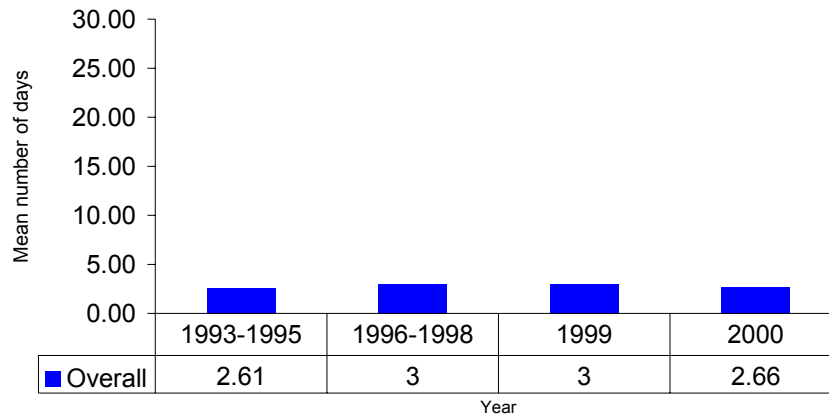
**Fig.5: Health Status Fair or Poor by Race**



### Physical Health during the past 30 days

Lancaster adults aged 18 and over reported an average of 2.7 days (95% CI, 2.29- 3.03) in last 30 days that they did not have good physical health, according to the 2000 survey. The mean numbers days that were reported as “not good physical health” days has not changed from previous years (Fig.6).

**Fig.6: Mean Number of Days During Past 30 Days When Physical Health Was Not Good**

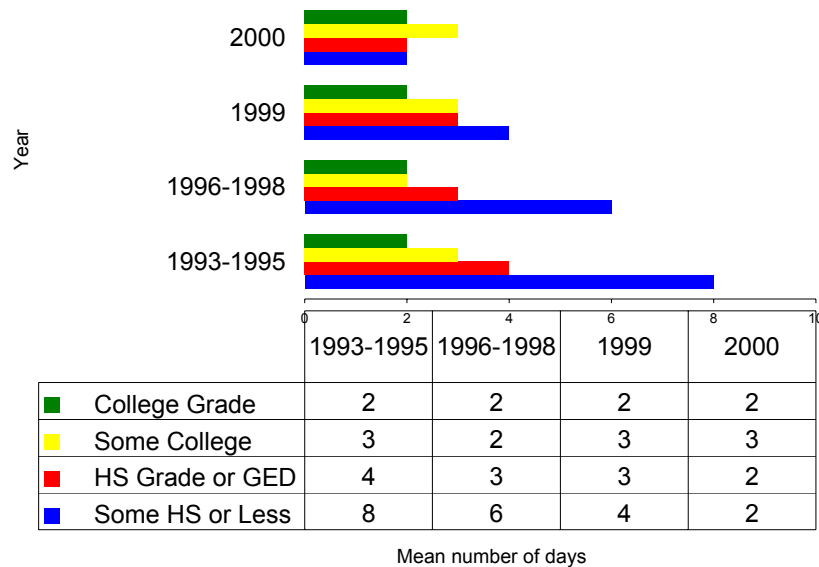


Women reported higher numbers of “not good physical health days” (3 days) than men (2 days). Of the other characteristics studied, the mean numbers of “physical health not good” during the 30 days preceding the survey was highest for people with annual household incomes of less than \$10,000 (5 days) and in the age group of 75 years and older (6 days, Table 2).

<b>Table 2: Current Physical Health Not Good</b>				
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Annual Household Income</b>				
Less than \$10,000	4	4	4	5
\$10,000 - \$15,000	4	3	6	4
\$15,000 - \$20,000	3	3	3	3
\$20,000 - \$25,000	3	1	3	5
\$25,000 - \$35,000	2	3	2	2
\$35,000 - \$50,000	2	2	3	2
\$50,000+	1	2	1	1
<b>Age Group</b>				
18-24	2	2	2	2
25-34	2	2	2	2
35-44	2	2	2	1
45-54	3	3	2	3
55-64	4	3	3	3
65-74	5	5	6	3
75+	8	7	7	6

In 2000, the mean number of “not good physical health days” did not vary due to differences in respondents education level. However, in previous years, it was lowest for people with college education (2 days) and gradually increased as the educational level decreased (Fig.7). Non-white races (3 days) reported more “not good physical health” days than whites (2 days).

**Fig.7: Mean Number of Physical Health "Not Good" by Education**



### Mental Health in past 30 days

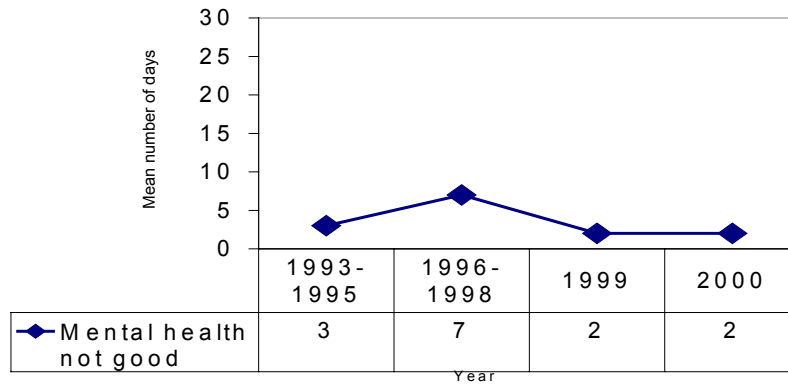
Mental health also is an important indicator of quality of life. The Center for Disease Control and Prevention calculates “Good health days” by subtracting the sum of “not good” physical health days and “not good” mental health days from 30 days.

Lancaster County adult respondents reported that their mental health was not good an average of 2 days (95% CI, 1.69-2.31) in the past 30 days prior to the survey.

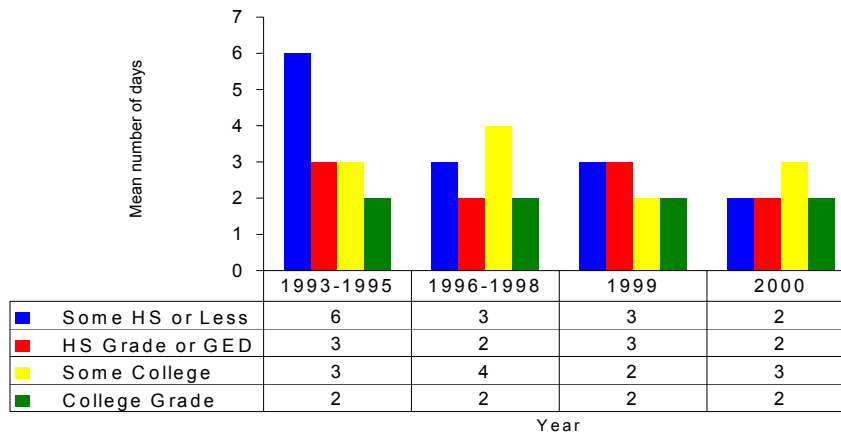
### Prevalence and Trend

Like physical health, the average number of “not good” mental health days has gone down from the previous survey years (Fig.8a). Similar to responses in which physical health was reported as “not good physical health,” the average number of not having good mental health days decreased as the income, age, and education level increased (Fig.8b, 8c). Both men and women reported same number of average days of not having good mental health (2 days). Although the average number of not good mental health days was higher (3 days) in non-white respondents than white respondents (2 days) in 2000, past seven-year surveys showed an inconsistent trend (Table 3).

**Fig.8a: Trend in Mean Numbers of "Mental Health Not Good" in Past 30 Days**



**Fig.8b: Mental Health Not Good by Education Level**



**Fig.8c: Trend in Mental Health Not Good by Income**

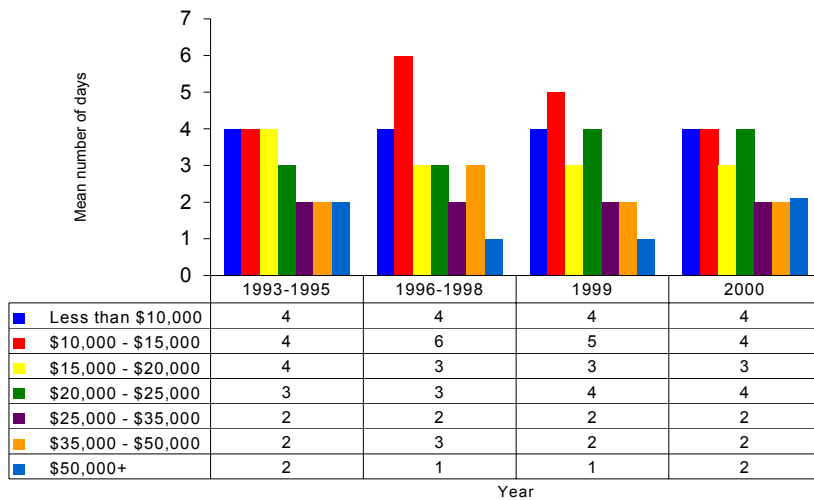


Table 3: Average number of days in past 30 days "Mental health was not good"				
Years	1993-1995	1996-1998	1999	2000
<b>SEX</b>				
Male	3	2	2	2
Female	3	3	3	2
<b>Race</b>				
White	3	3	2	2
Non-White	2	4	3	3

## Activity Limitation

Disability is a major public health problem in the United States; one that results in a reduction in the quality of life and an increase in dependence on the health-care system. About 35 million Americans have disabling conditions that interfere with their life activities. Measurable aspects of the prevalence of disability in a given population are reported as limitations in activity caused by poor physical and mental health, injuries, and impairments. BRFSS respondents who reported one or more days of "not good" physical and mental health were asked a follow-up question about the number of days in which their activity was limited.

BRFSS respondents reported in 2000, an average of 3 days (95% CI, 2.6-3.6), when they could not do their usual activities, such as self-care, work, or recreation because of the poor physical or mental health in the past 30 days.

### Prevalence and Trend

The mean number of limited activity days dropped in 2000 by 1 day as compared to 1996-1998 and 1999 periods (Fig.9).

**Fig.9: Average Number of Days Activity Was Limited by Poor Physical or Mental Health**

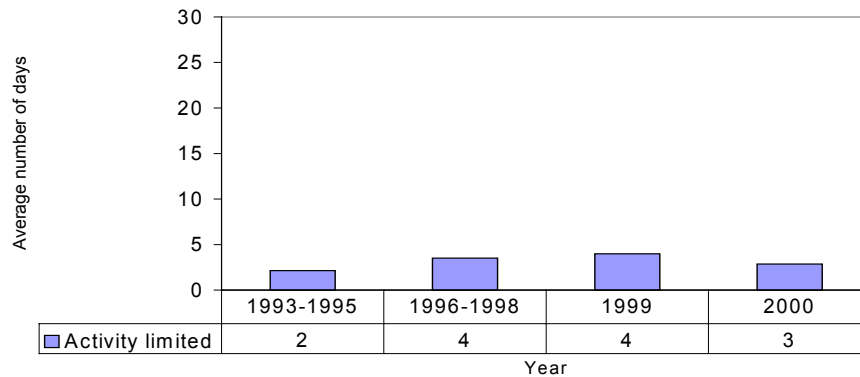
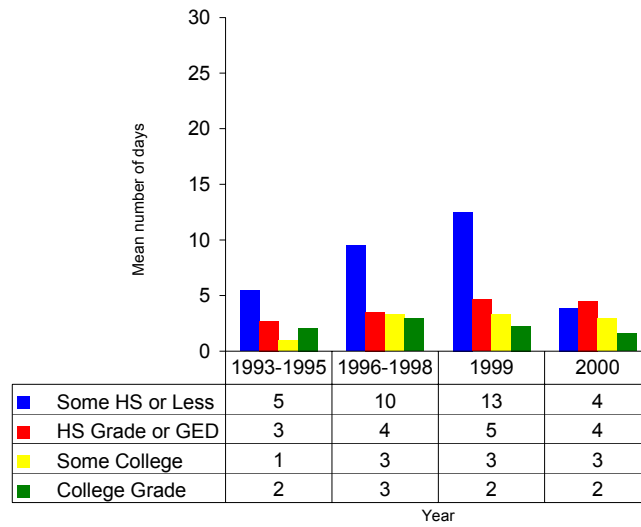


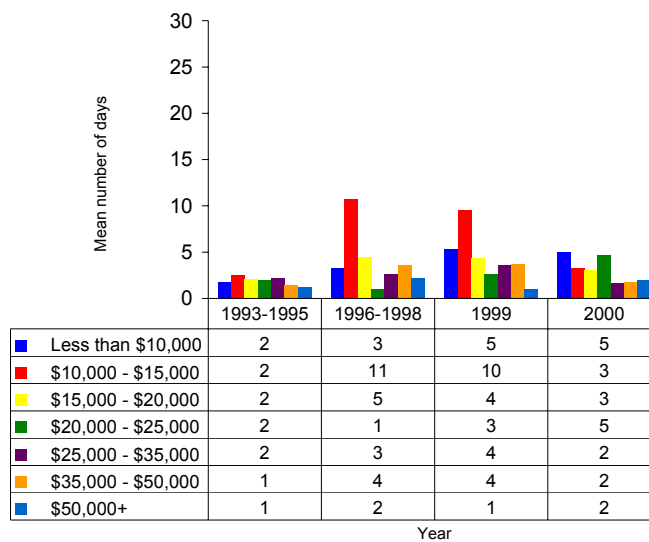
Table 4 shows limited activity days by respondent's gender, age, and race. In a way similar to the other two questions regarding quality of life, people with increasing age had higher average number of limited activity days: 9 days for age 75 and over compared with 2 days for 18-24 year older. People with lower income and lesser education level had more numbers of activity limitation days due to not good physical and mental health (Fig.10a, 10b).

<b>Table 4: Poor Physical/Mental Health Affected Activity</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Sex</b>				
Male	2	5	3	2
Female	2	3	4	4
<b>Race</b>				
White	2	4	3	3
Non-White	2	2	8	1
<b>Age</b>				
18-24	1	4	2	2
25-34	2	3	2	2
35-44	2	3	3	2
45-54	2	3	3	2
55-64	4	2	6	5
65-74	4	4	11	4
75+	6	9	9	9

**Fig.10a: Poor Physical/Mental Health Limited Activity by Education**



**Fig.10b: Poor Physical/Mental Health Limited Activity by Income**



## Access to Health Care

In the United States, the availability of health care coverage is an important issue in an individuals access to health care. In addition, escalating health-care costs are a major barrier to accessibility of health care and often compel individuals to refrain from seeking medical care because of concerns about cost, regardless of whether they have health insurance. An accurate estimate of the number of people who are uninsured is difficult to make. Much of this difficulty is due to the characteristics of the population lacking insurance. Typical characteristics include working in small companies that do not provide insurance as an employee benefit, being unemployed, or lacking a permanent residence.

To determine the prevalence of people aged 18 or over who were uninsured in Lancaster County, BRFSS respondents were asked, “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?” Those responding “no” to this question were defined as having no health care coverage. In addition, failure to seek medical care because of cost was based on response to question “Was there any time during the last 12 months when you needed to see a doctor but could not because of the cost?”

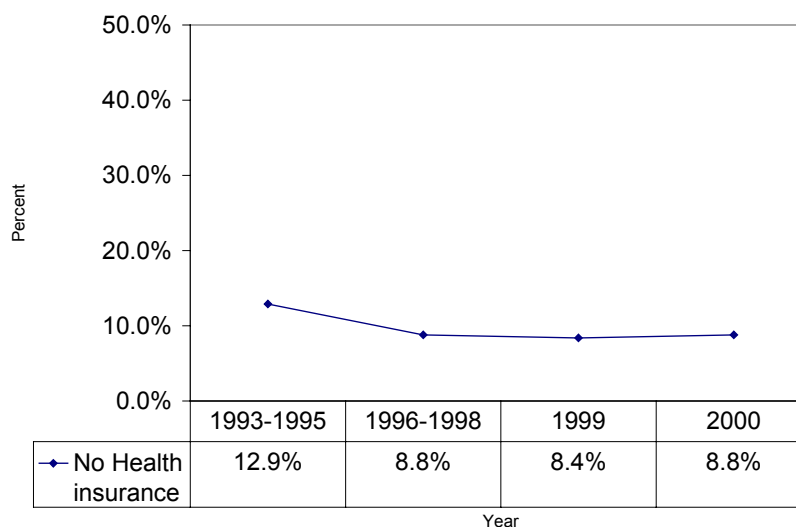
### No health Insurance

During 2000, 8.8 percent (95% CI, 2.3%-10.3%) of Lancaster residents aged 18 years and older did not have any kind of health care plan.

### Prevalence and Trend

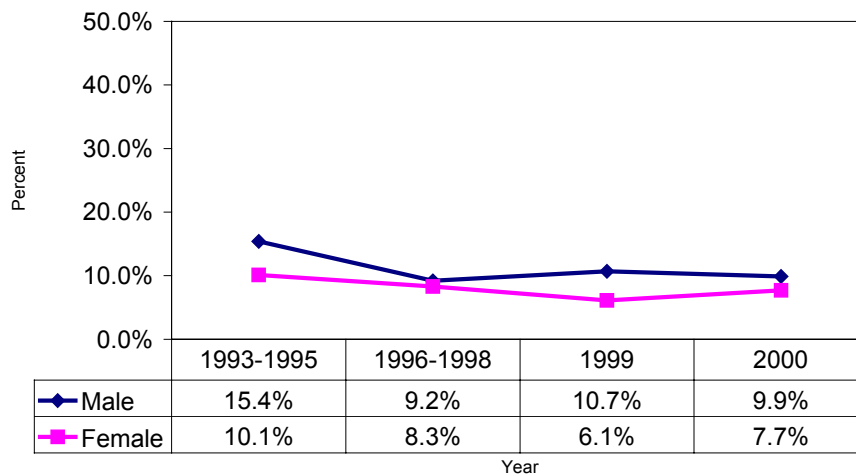
Figure 11 reveals a trend in uninsured rates over the past seven years. The percent of adults with no health care coverage declined in the 1996-1998 period by nearly 4 percent. But for the 1993-1995 period to date it has remained fairly stable.

**Fig.11: Trends in" No Health Care Plan"**

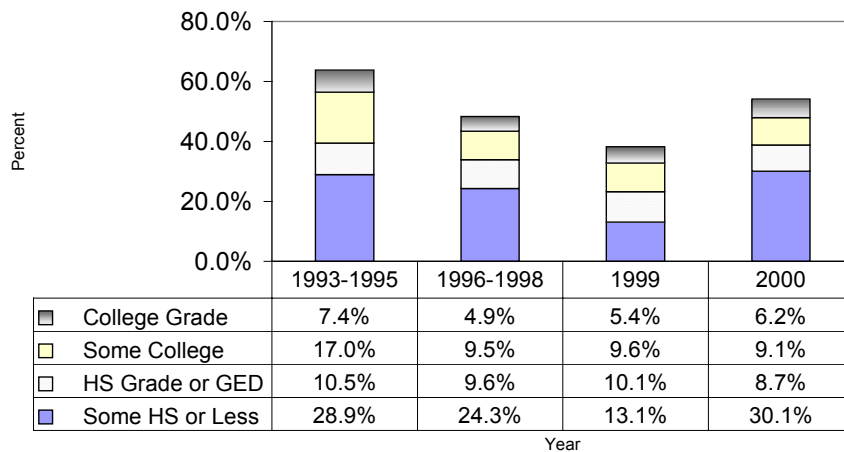


Men (9.9%) were more likely to be uninsured than women (7.7%) in Lancaster County. Even though non-coverage percentages have declined for both sexes since 1993-1995, a higher proportion of uninsured men than women was evident regardless of survey years (Fig.12a).

**Fig.12a: Trend in "No health Care Plan" by Gender**



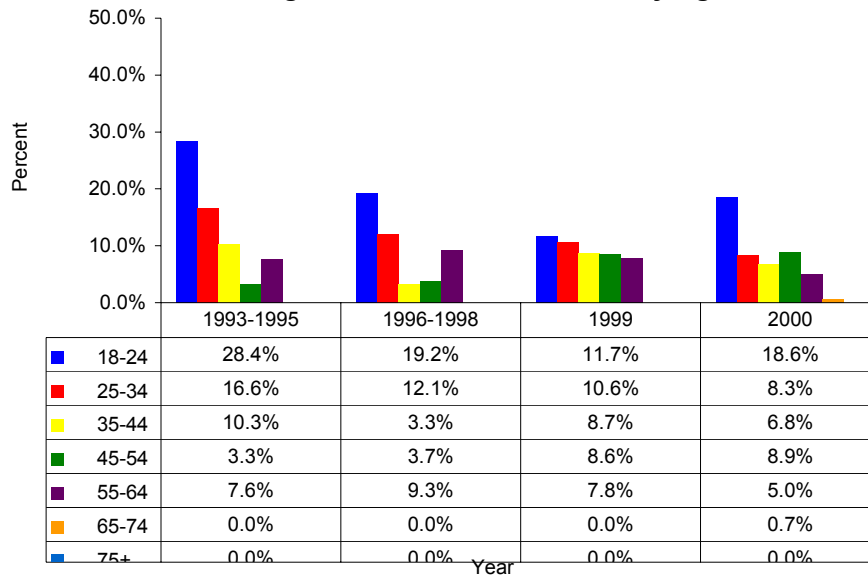
**Fig.12b: No Health Care Plan by Education**



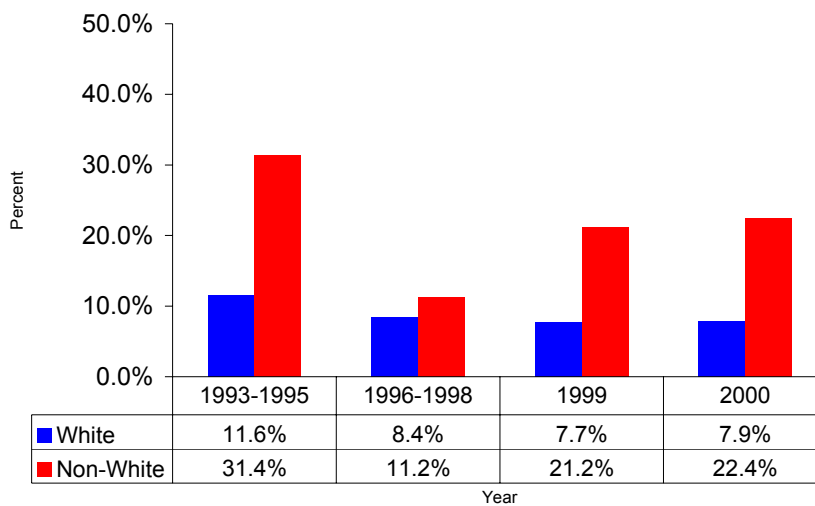
Young adults, or adults with “some high school education or less,” were least likely to have health insurance than older adults and those having higher education. Approximately 19 percent of adults aged 18-24 years reported that they did not have any health insurance at the time of survey. Meanwhile, almost all of the respondents of age 65 years and older, reported having some kind of health care plan (Table5a). Approximately 30 percent respondents “with some high school or less education” did not have any health care plan at the time of survey as compared to 6.2 percent for college

graduates (Fig.12b). People having low household incomes tend to be more uninsured than people who had higher incomes (Table 5a). A notable difference in non-coverage was observed between whites and non-whites. According to the 2000 survey, non-whites had the highest rate of non-coverage (22.4%) than whites (7.9%). Higher proportions of uninsured non-whites were also observed in the surveys conducted in the past years (Fig.13).

**Fig.12c: No Health Care Plan by Age**



**Fig.13: No Health Care Plan by Race**



<b>Table 5a: No health care plan</b>				
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Annual Household Income</b>				
Less than \$10,000	19.2%	19.3%	10%	14.5%
\$10,000 - \$15,000	28%	19.6%	15%	24%
\$15,000 - \$20,000	20.3%	21.6%	17.2%	25.2%
\$20,000 - \$25,000	18%	10%	19.3%	8.8%
\$25,000 - \$35,000	9%	7.8%	10.6%	11.9%
\$35,000 - \$50,000	2.3%	2.8%	2.1%	2.3%
\$50,000+	5.4%	1%	3%	2.9%
<b>Age Group</b>				
18-24	28.4%	19.2%	11.7%	18.6%
25-34	16.6%	12.1%	10.6%	8.3%
35-44	10.3%	3.3%	8.7%	6.8%
45-54	3.3%	3.7%	8.6%	8.9%
55-64	7.6%	9.3%	7.8%	5%
65-74	0%	0%	0%	0.7%
75+	0%	0%	0%	0%

### Could not see Doctor Because of Cost

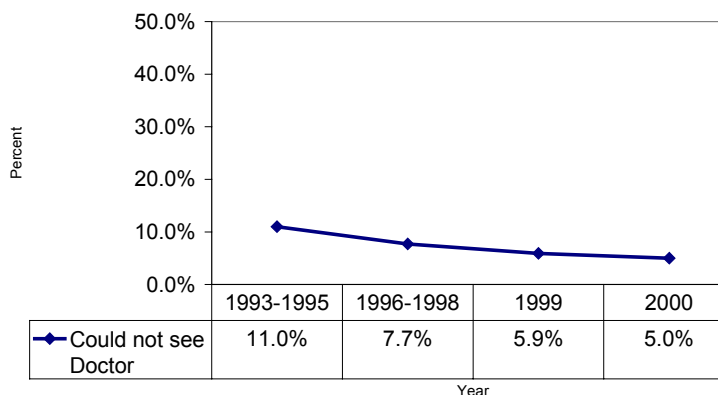
As mentioned earlier, many people in the United States face difficulties in paying their medical bills regardless of their health care coverage status. According to an article published in the Journal of American Medical Association (JAMA) in 1994, about three fourths of people in the United States experienced difficulties in paying their medical bills, even with health insurance.

According to the BRFSS survey, 5 percent (95% CI, 3.8%-6.2%) of the respondents indicated that there was a time in the past 12 months when they needed to see a doctor but could not because of the cost.

### Prevalence and Trend

The proportion of adults who considered cost as a barrier to seeing a doctor when needed has gradually decreased from 11 percent in 1993-1995 to 5 percent in 2000 (Fig.14).

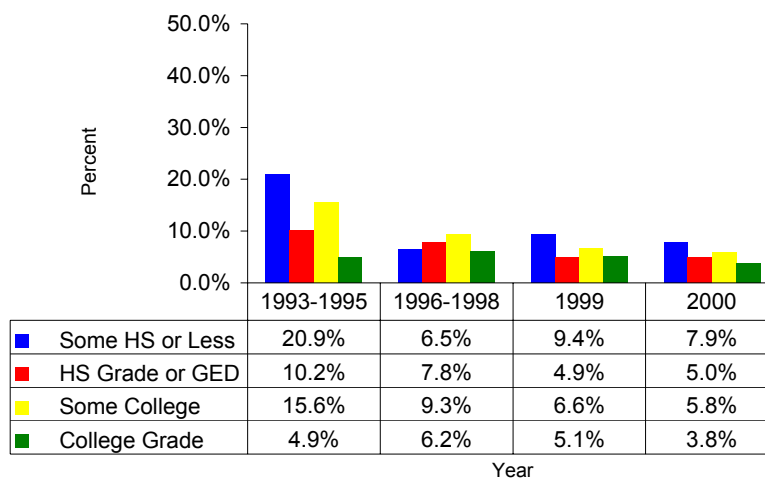
**Fig.14: Trend in "Could Not See Doctor Because of Cost"**



Higher proportion of respondents reporting inability to see doctor because of potential cost of care were noted in respondents of lower income, lesser education, non-white racial group and younger age groups (Table5b).

<b>Table 5b: Could not see Doctor Because of Cost</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Annual Household Income</b>				
Less than \$10,000	10.9%	5.1%	8%	7%
\$10,000 - \$15,000	19.9%	15.3%	14.1%	6.3%
\$15,000 - \$20,000	31.1%	19.9%	14.2%	8.9%
\$20,000 - \$25,000	18.5%	10.2%	11.1%	8.5%
\$25,000 - \$35,000	7.5%	10.6%	5.6%	10.3%
\$35,000 - \$50,000	4.2%	5.5%	3.9%	3.3%
\$50,000+	3.7%	1.7%	1.9%	1.9%
<b>Highest Grade Completed</b>				
Some HS or Less	20.9%	6.5%	9.4%	7.9%
HS Grad or GED	10.2%	7.8%	4.9%	5%
Some College	15.6%	9.3%	6.6%	5.8%
College Grad	4.9%	6.2%	5.1%	3.8%
<b>Age Group</b>				
18-24	17.0%	11.7%	2.3%	5.1%
25-34	14.4%	9.8%	10.9%	8%
35-44	11.5%	7.9%	6.6%	3.2%
45-54	7.1%	4.3%	5.1%	5.7%
55-64	8.7%	7.8%	7.6%	3.1%
65-74	0%	0%	2.4%	3.6%
75+	1.3%	2.8%	2.8%	3%

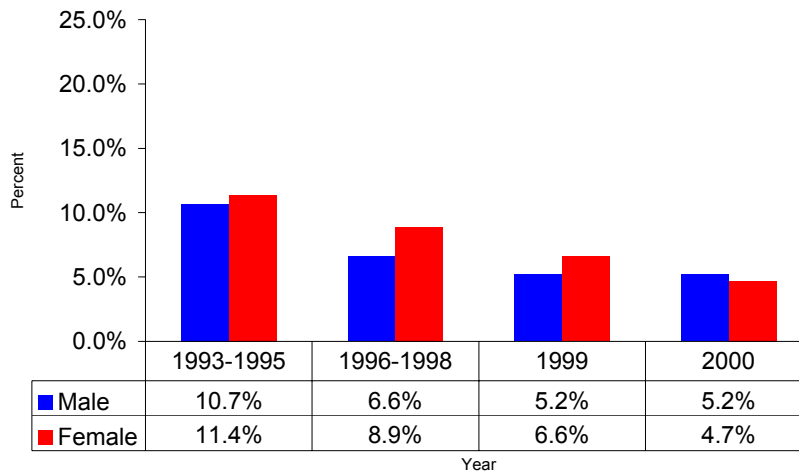
**Fig.15: Trend in " Could Not See Doctor Because of Cost" by Education Level**



Respondents with “some high school education or less” (7.9%), who also reported higher non-coverage status, were more likely to refrain from visiting a doctor because of cost than were respondents with college education (3.8%, Fig.15).

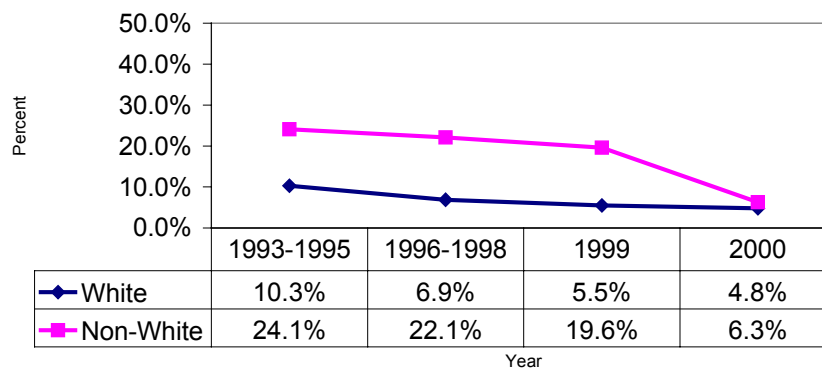
Similarly, the proportion of respondents who stated that cost had kept them away from going to a doctor, gradually decreased with advancing age and income (table 5). Nearly equal proportions of men (5.2%) and women (4.7%) mentioned that they could not visit a doctor in the past 12 months because of cost. The rates for both sexes have declined by half in 2000 from the 1993-1995 survey periods (Fig.16).

**Fig.16: Trend in "Could Not See Doctor Because of Cost" by Gender**



Only 4.8 percent of white respondents compared to 6.3 percent non-white respondents mentioned that there had been a time in the past year when they were unable to see doctor due to high cost of care. However, the gaps in the prevalence between these two groups appeared to have been reduced over the periods covered by this report (Fig.17).

**Fig.17: Trend in "Could Not See Doctor Because of Cost" by Race**



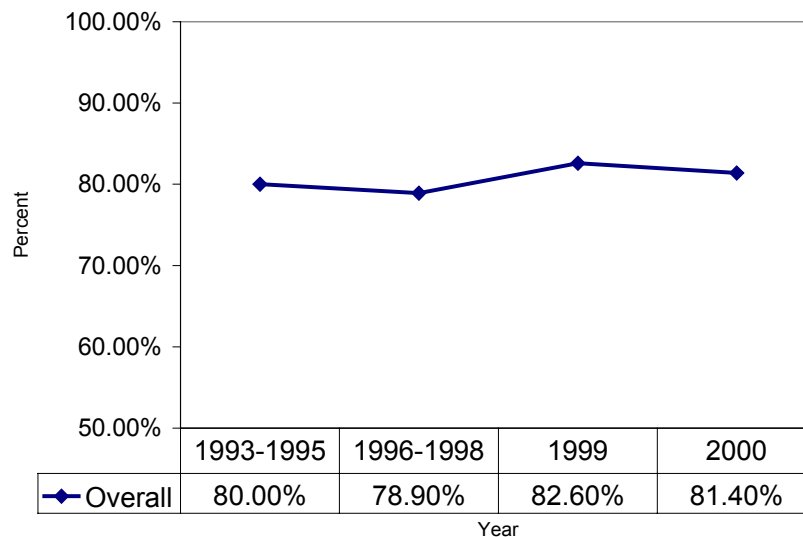
## Routine Checkup

Countywide in 2000, an estimated 81.4 percent (95% CI, 79.3%-83.5%) of adults had received a routine checkup within the past two years.

### Prevalence and Trend

The proportion of adult residents who had visited a doctor in past two years to receive routine medical checkups remained somewhat consistent over the years (Fig.18).

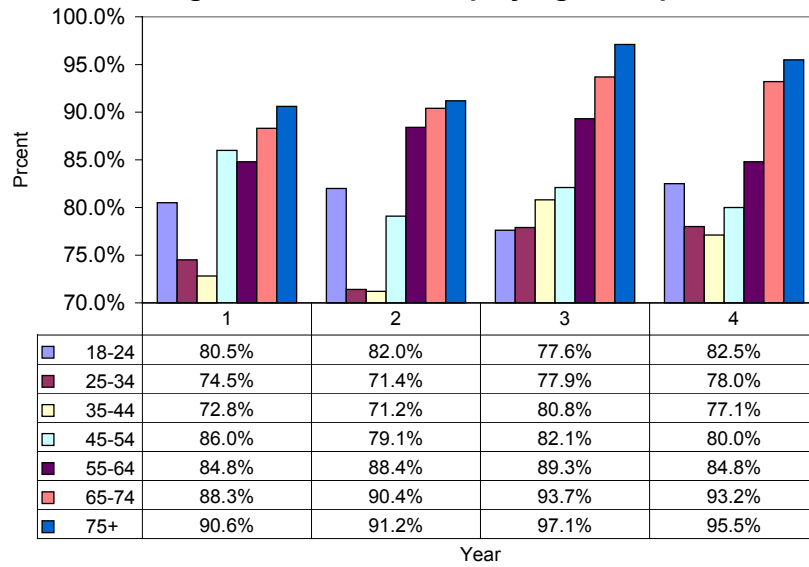
**Fig.18: Routine Checkup in Past Two Years**



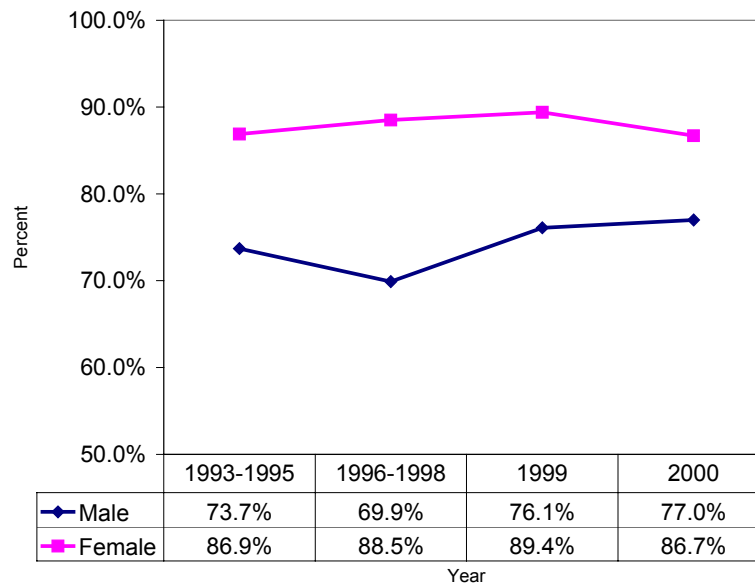
The proportion of adults who received a routine checkup in the past two years increased with growing age (Fig.19). More seniors (age 60 and over) had visited doctor for a routine checkup in last two years than younger adults in the County. Nearly 96 percent (95.5%) of adults of aged 75 years or more said that they had gone for a routine checkup compared to 82.5 percent of adults aged 18-24 years.

Overall, women (86.7%) were much more likely than men (77%) to report having a routine checkup in the past two years (Fig.20). Routine checkup rates evaluated by other demographic variables failed to yield any notable trends (Table 6).

**Fig.19: Routine Checkup by Age Group**



**Fig.20: Routine Checkup by Gender**



<b>Table 6: Routine Checkup in Past 2 Years</b>				
	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Highest Grade Completed</b>				
Some HS or Less	86.2%	84.7%	83.2%	73.3%
HS Grade or GED	81.9%	81.3%	83%	82.8%
Some College	78.2%	78.9%	80.8%	82.2%
College Grade	78.9%	76.1%	83.6%	81.6%
<b>Annual Household Income</b>				
Less than \$10,000	82.6%	74.7%	84.1%	86.5%
\$10,000 - \$15,000	75.1%	73.9%	73.2%	83.3%
\$15,000 - \$20,000	89.4%	72.6%	83.2%	82.9%
\$20,000 - \$25,000	70.6%	77.8%	69.8%	86.1%
\$25,000 - \$35,000	83.7%	78.1%	85.2%	73.4%
\$35,000 - \$50,000	78.9%	81.5%	83.7%	80.1%
\$50,000+	81.2%	79%	87.4%	86.8%
<b>Race</b>				
White	79.8%	79.2%	82.7%	82.1%
Non-White	82.1%	76.5%	80.5%	76.9%

## Diabetes Mellitus Prevalence

Diabetes mellitus is a disease characterized by high levels of blood glucose resulting from defects in insulin secretion, insulin action, or both. A confirmed fasting plasma glucose value of greater than or equal to 126-milligrams/deciliter indicates a diagnosis of diabetes. Severe long-term health complications that are associated with diabetes include limb amputation, renal failure, blindness, nerve damage, dental disease, and cardiovascular disease. Infants of diabetic mothers are more likely to die at birth.

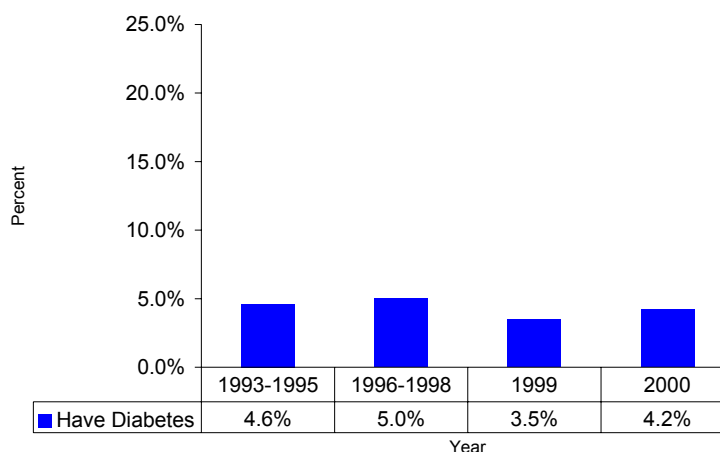
In the United States, diabetes affects fourteen million people and is the fourth leading cause of death. As of 1996 an estimated 66,812 Nebraskans had diabetes. In 1998 diabetes was the seventh leading underlying cause of death in the state of Nebraska. Early detection of diabetes and proper disease management can control blood sugar levels and reduce, delay, or prevent the severe complications associated with diabetes. To plan and implement public health programs for diabetes mellitus, public health officials need to be able to measure accurately the magnitude of disease burden of diabetes mellitus.

To determine the specific prevalence of self-reported diabetes in Lancaster County, BRFSS respondents were asked if they had ever been told by a doctor that they had diabetes. Women who responded “yes” were then asked if they were told only while they were pregnant (gestational diabetes). Women with gestational diabetes were not included in the group defined as diabetic in the following analysis.

### Prevalence and Trends

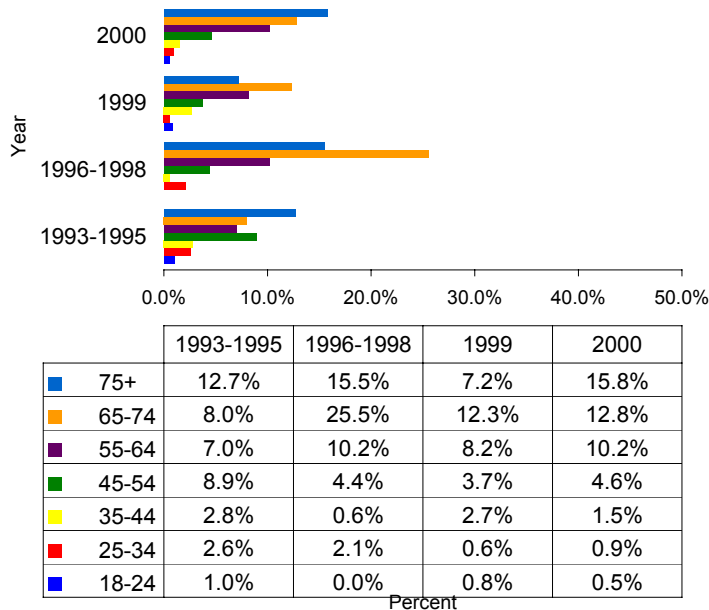
Estimates obtained from the Lancaster County BRFSS indicate that, in 2000, approximately 8,041 adults (4.20% of 191,463 adults of aged 18 and older) in Lancaster County have been told they had diabetes by a physician (95% CI, 3.2%-5.2%). Rates for diabetes were 4.6 percent in 1993-1996, 5 percent in 1996-1998, and 3.5 percent in 1999 (Fig.21).

**Fig. 21: Trend in Diabetes**



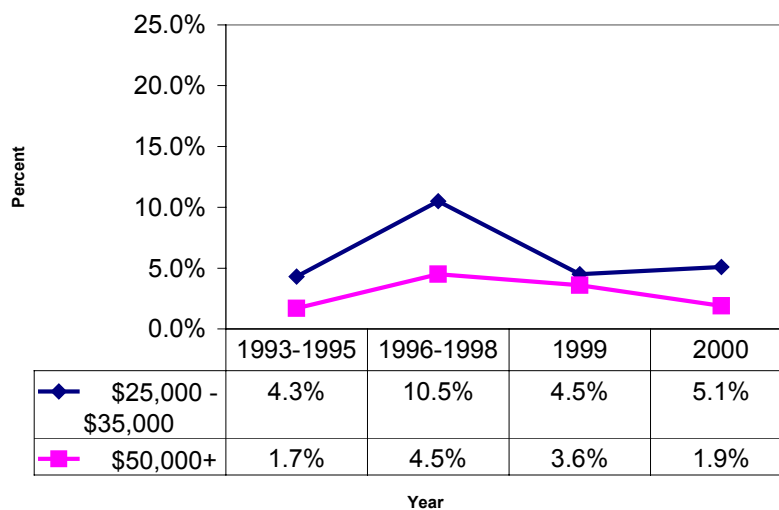
Prevalence of self-reported diabetes ranged from .05 percent among adults aged 18-24 to 12.8 percent among adults aged 65-74. Prevalence of diabetes among older age groups, regardless of survey years, persistently demonstrated higher rates than adults of younger age groups (Fig.22a).

**Fig.22a: Prevalence of Diabetes by Age**



An examination of the income and prevalence of diabetes reveals that a person with higher income is less likely to have diabetes. Only 1.9 percent of respondents earning \$50,000 or more were informed that they had diabetes compared to 5.1 percent respondents with a yearly income \$25,000-\$35,000. Similar differences in the prevalence between these two groups were noted in the preceding surveys (Fig.22b).

**Fig. 22b: Prevalence of Diabetes by Two Income Groups (\$25,000-\$35,000 and \$50,000+)**



Although the prevalence of diabetes did not vary much by respondent's gender, more females (4.5%) than males (3.9%) reported having diabetes (Fig.22c). Diabetes by respondent's race and education level did not show any apparent trend (Table 7).

**Fig.22c: Prevalence of Diabetes by Gender**

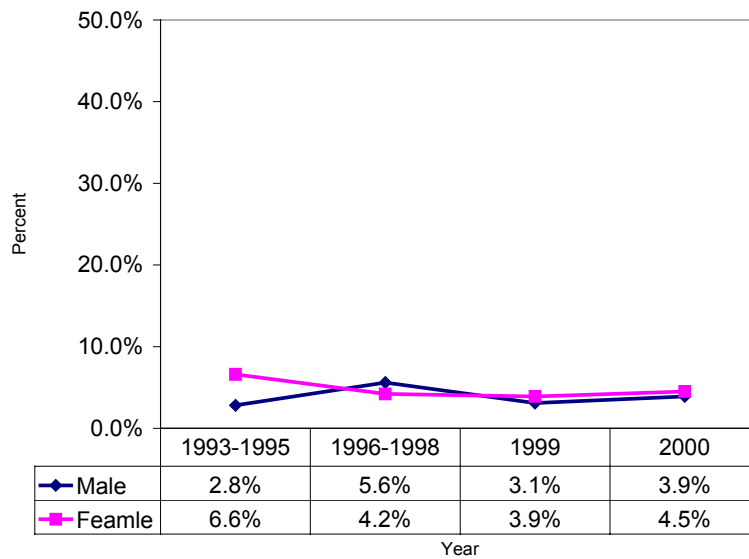


Table 7: Prevalence of Diabetes				
Year	1993-1995	1996-1998	1999	2000
<b>Highest Grade Completed</b>				
Some HS or Less	13.4%	11%	2.8%	3.8%
HS Grade or GED	8%	6.8%	4.4%	6.1%
Some College	2.9%	2.6%	3.1%	3%
College Grade	2.1%	4.9%	3.2%	3.7%
<b>Annual Household Income</b>				
Less than \$10,000	10.7%	3.9%	1.8%	3.9%
\$10,000 - \$15,000	8.5%	4.2%	9%	7.5%
\$15,000 - \$20,000	6.6%	3.1%	4.1%	3.2%
\$20,000 - \$25,000	4.3%	4.7%	4.2%	6.2%
\$25,000 - \$35,000	4.3%	10.5%	4.5%	5.1%
\$35,000 - \$50,000	1.7%	3.6%	3.5%	5.5%
\$50,000+	1.7%	4.5%	3.6%	1.9%
<b>Race</b>				
White	4.3%	5%	3.5%	4.3%
Non-White	11.2%	4.1%	2.7%	4.7%

## Hypertension

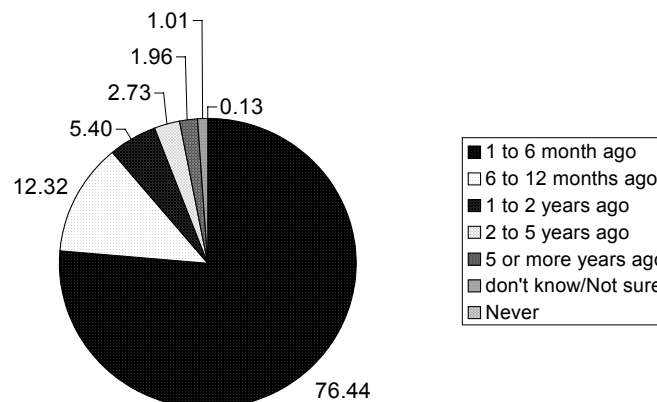
High blood pressure is defined as systolic blood pressure that is greater than or equal to 140 millimeters of mercury (mm Hg) and/or diastolic blood pressure of more than 90 mm of mercury (mm Hg). High blood pressure is one of the major risk factors of getting cardiovascular diseases, primarily coronary heart disease and stroke, and kills nearly as many Americans as all other diseases combined. There were 416 deaths (25.2 percent of all deaths) in 2000 due to cardiovascular causes in the Lancaster County. It is also one of the leading causes of disability. Nearly one-fourth of adults, as many as 50 million Americans, have elevated blood pressure or take antihypertensive medication.

Fortunately, hypertension is a modifiable risk factor. Once high blood pressure is discovered it can be monitored and regulated through diet, exercise, and medication, thus reducing the chance of potentially fatal conditions. Because high blood pressure produces no clear symptoms, regular blood pressure measurements are necessary for detection and control. Despite recent increases in the proportion of Americans who are aware that they have high blood pressure, a large proportion of Americans with high blood pressure still are unaware that they have this disorder. Therefore, frequent blood pressure screening is vital for people of all ages. The U.S. Preventive Services Task Force recommends blood pressure screening for all adults every two years. To determine prevalence of hypertension screening and magnitude of high blood pressure in the community, BRFSS respondents were asked these two questions: (1) “About how long it has been since you last had your blood pressure taken by a doctor, nurse, or other health professional?” (2) “Have you ever been told by a doctor, nurse, or other health professional that you have high blood pressure?” Respondents who did not have blood pressure checked within this time frame were considered a population at risk, and those who said “yes” to question 2 were defined as hypertensive. No High blood pressure questions were asked in the 2000 period.

### High blood pressure Screening (Hypertension Awareness)

In 1999, 4.7 percent (95% CI, 3.4 %- 6%) of Lancaster County Adults were considered at risk, because they did not have their blood pressure checked within the past two years (Fig.23).

Fig.23: Time Since Last Blood Pressure Checked

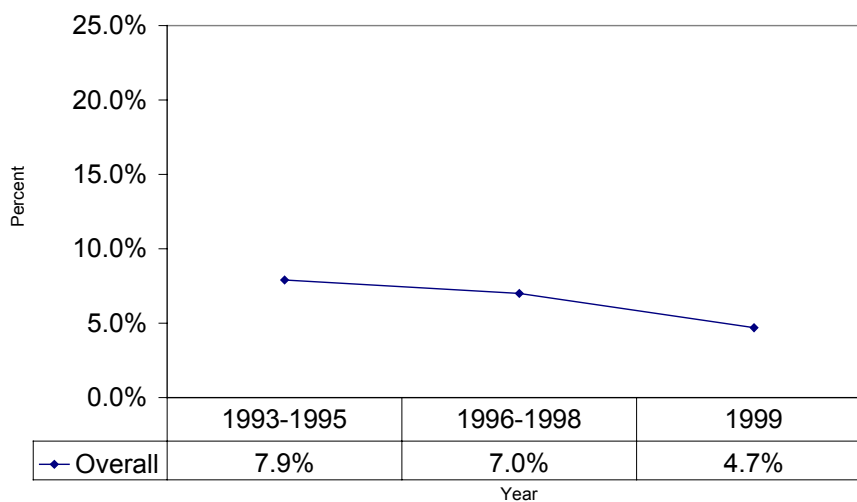


Only 0.1 percent said they never had their blood pressure checked in their life.

### Prevalence and Trends

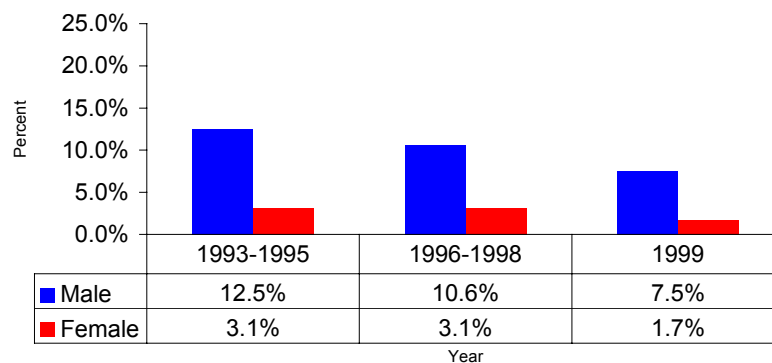
The prevalence of not having blood pressure measured in past two years has declined substantially (7.9% in 1993-1995 to 4.7% in 1999) over the past six years in the Lancaster County. This decline points to an overall increase in hypertension awareness among the County residents (Fig.24).

**Fig.24: Had Not Checked Blood Pressure in Past Two Years**



Lancaster County men (7.5%) were more likely than women (1.7%) to report not having their blood pressure checked within the past two years. A seven years trend demonstrates a higher blood pressure screening awareness among women than men (Fig.25).

**Fig.25: Had Not Checked Blood Pressure in Past Two Years**

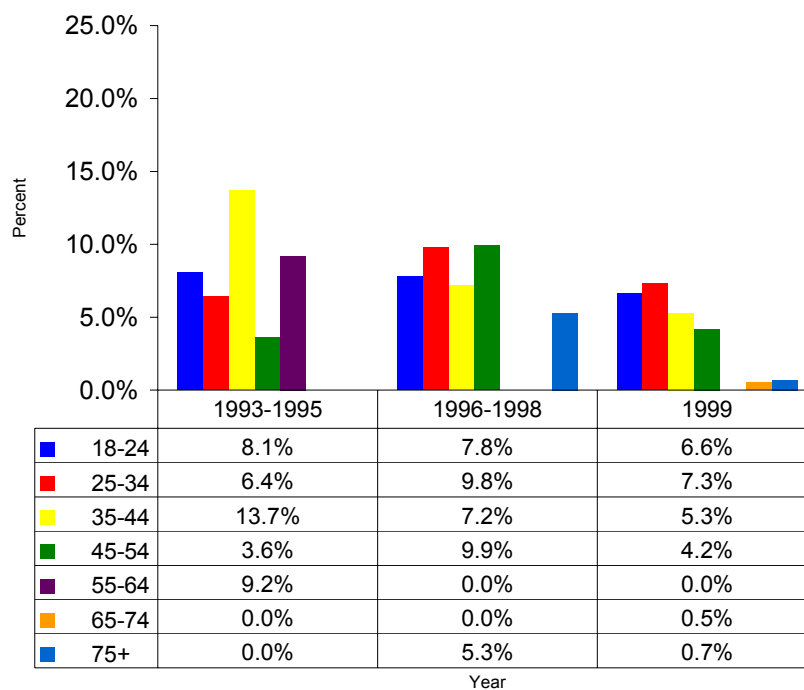


The proportion of BRFSS adults who reported they did not have their blood pressure checked within past two years decreased with advancing age (Fig.26). Only 0.5 percent of adults aged 65-74 years did not have their blood pressure checked in the past two years as compared to 7.3 percent adults aged 25-34 years. Comparison rates for the same age groups were 0 percent versus 6.4 percent in 1993-1995, and 0 percent versus 9.8 percent in 1995-1998.

In 1999, the proportion of respondents at risk were lowest among income of \$50,000 or more (1.5%) and were highest among respondents with income of \$20,000-\$25,000 (12.3%). However, surveys in previous years failed to show such trend (Table 8).

Although the hypertension awareness rate did not differ significantly among respondents with different education levels in the 1999 and 1995-1998 surveys, as smaller percent (3.6%) of adults with college degree reported not having their blood pressure checked in two years than adults with an education level of “some high school or less.”

**Fig.26: Had Not Checked Blood Pressure in Past Two Years by Age**



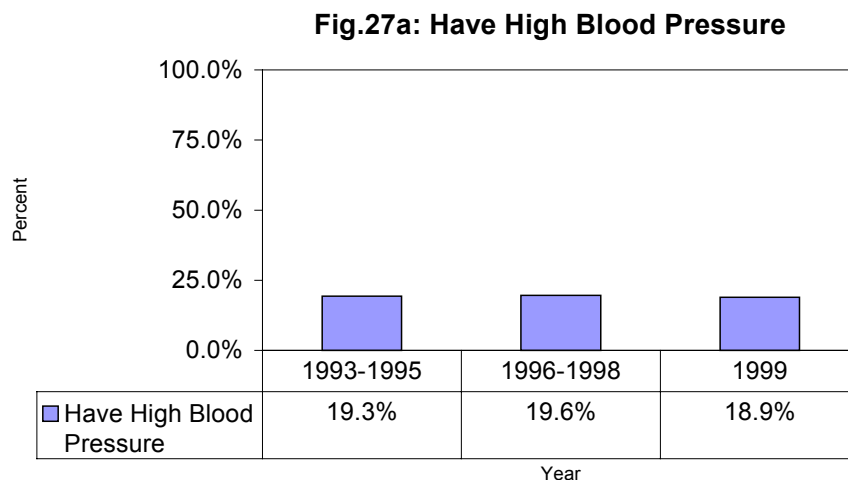
<b>Table 8: Respondents Who Did Not Have Blood Pressure Checked in Past Two Years</b>			
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Highest Grade Completed</b>			
Some HS or Less	13.4%	9.1%	5.2%
HS Grade or GED	11.7%	8.2%	5.1%
Some College	7.6%	4%	5.1%
College Grade	3.6%	9.3%	4%
<b>Annual Household Income</b>			
Less than \$10,000	1.5%	0%	8.6%
\$10,000 - \$15,000	4%	2.9%	5%
\$15,000 - \$20,000	5.8%	9.9%	5.1%
\$20,000 - \$25,000	4.5%	7.5%	12.3%
\$25,000 - \$35,000	12.2%	11%	5.3%
\$35,000 - \$50,000	9.1%	5.6%	2.2%
\$50,000+	5.1%	4.4%	1.5%

### Prevalence of High blood pressure

According to BRFSS criteria, 19 percent of respondents in 1999 (95% CI, 16.5%-21.5%) reported as being hypertensive.

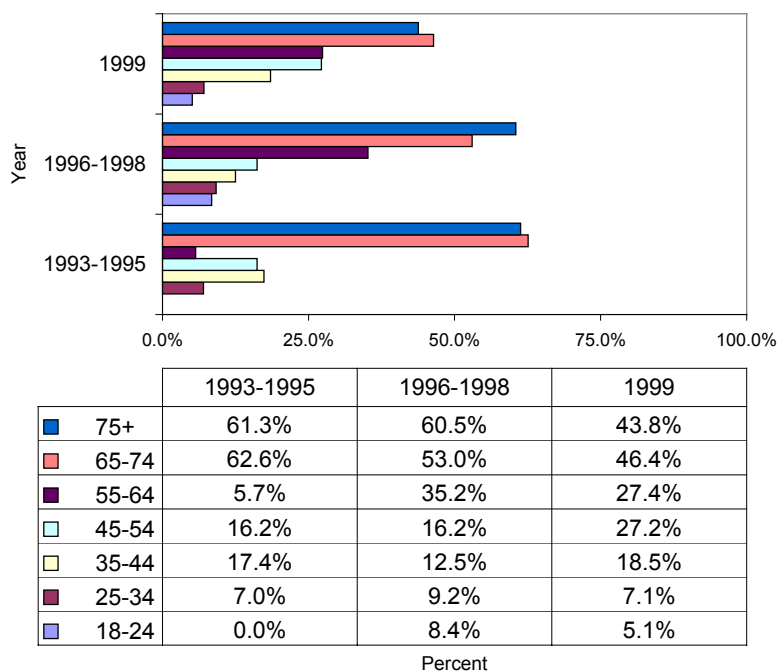
### Prevalence and Trend

The proportion of adults who fell into the category of hypertensive patient remained about the same (around 19%) in all the survey periods, indicating a steady prevalence of hypertension in the County (Fig.27a).



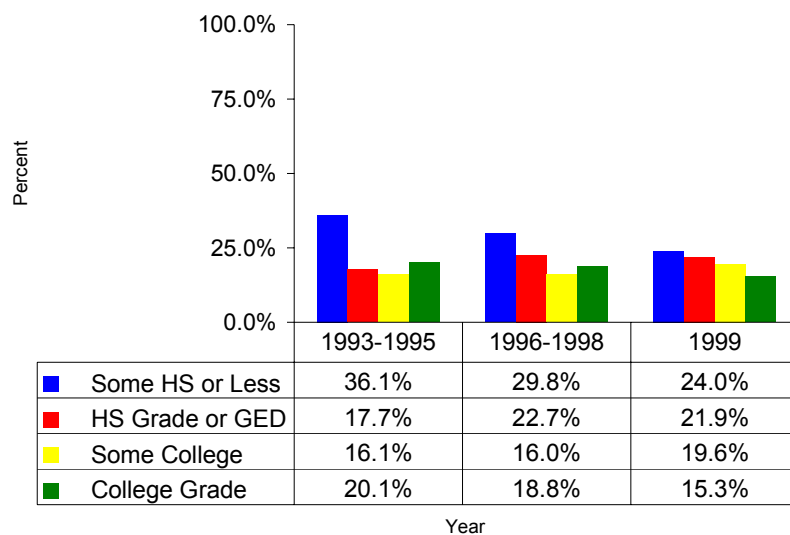
Increasing age appeared to be linked to higher prevalence of hypertension among adults of aged 18 and older (Fig.27b).

**Fig.27 b: Respondents Who Have Ever Been Told Their Blood Pressure Was High by Age**



The age specific rates for hypertensive patients were highest among the older population and lowest among the younger population. Four in 10 adults (43.8%) aged 75 or more have been told they have high blood pressure in Lancaster County in 1999, as opposed to 5.1 percent adults of aged 18-24 years.

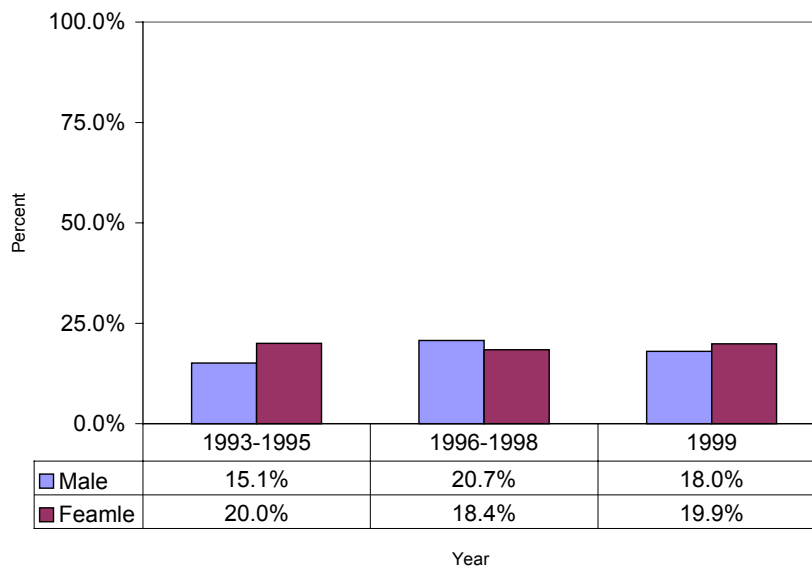
**Fig.28: Have High Blood Pressure by Education**



According to all the surveys, the higher the education levels the lower the chances of having high blood pressure. In 1999, almost one-fourth (24%) of BRFSS respondents with “some high school or less education” had been told that they had high blood pressure, whereas only 15.3 percent of College graduates were told the same (Fig.28).

Both men (18%) and women (19.9%) reported almost equal rates of high blood pressure in 1999 (Fig.29).

**Fig.29: Have High Blood Pressure by Gender**



More non-whites (21.4%) than whites (18%) reported that they were hypertensive. No particular trends in prevalence of high blood pressure by respondent's household income were observed (Table 9).

<b>Table 9: Respondents Ever Told To Have High Blood Pressure</b>			
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Annual Household Income</b>			
Less than \$10,000	14.5%	5.8%	16.3%
\$10,000 - \$15,000	29.3%	18.3%	23.6%
\$15,000 - \$20,000	11.8%	30.3%	18.5%
\$20,000 - \$25,000	16.1%	19.7%	14.2%
\$25,000 - \$35,000	14.4%	32.3%	14.5%
\$35,000 - \$50,000	18.4%	15.1%	17.9%
\$50,000+	15.4%	18.1%	23.5%
<b>Race</b>			
White	19.0%	20.1%	18.8%
Non-White	15.2%	7.2%	21.4%

## Cholesterol Awareness

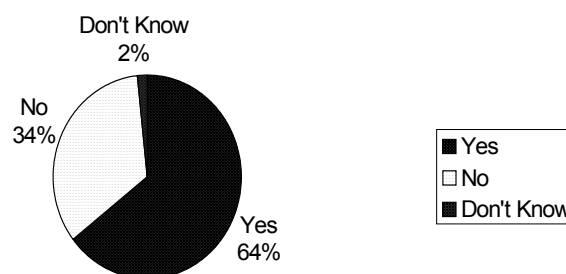
Blood cholesterol is considered high at 200 milligrams per deciliters (mg/dL) or above. Cholesterol is transported throughout the bloodstream on a carrier called a lipoprotein. One type of lipoprotein, the high-density lipoproteins (HDL), are thought to help remove cholesterol from the bloodstream, hence, this is often called the "good" cholesterol. Low-density lipoproteins (LDL) deposit cholesterol in the artery walls and a buildup can then lead to arteriosclerosis; therefore, this type is usually referred to as "bad" cholesterol. Coronary heart Disease (CHD) is the number one killer of both men and women in the U.S. Each year, more than 500,000 Americans die of heart attacks caused by CHD, and some 7 million Americans suffer from coronary heart disease (CHD). The association between high blood cholesterol and coronary heart disease (CHD) has been well documented.

Lowering the total and low-density lipoprotein cholesterol level can reduce the incidence of CHD. For example, lowering the serum cholesterol by 1 percent can result in 2 percent decrease in the risk for CHD. It is recommended by the National Cholesterol Education Program (NCEP) that all adults should check their blood cholesterol levels at least once every five years. This action would allow them to take necessary steps to lower their levels. One of the national health objectives for 2010 is to reduce the percentage of adults aged 20 years or more with total blood cholesterol levels of greater than 240 mg/dL. One strategy for achieving this objective is to increase awareness of high blood cholesterol level. Respondents of the BRFSS survey were asked whether they had ever had their cholesterol levels checked and, if so, whether they were told their cholesterol levels are high. They were also asked about the last time they had their blood cholesterol checked. The cholesterol awareness question was not asked in the 2000 survey.

### Ever Had Cholesterol Checked

Approximately 64 percent (64.2%, 95% CI, 61.2%-67.2%) respondents in 1999 answered "yes" to the question "Blood cholesterol is a fatty substance found in the blood. Have you ever had your blood cholesterol checked?" Thirty-four percent answered "no". Only 2 percent reported that they either "do not know" or were "not sure"(Fig.30a)

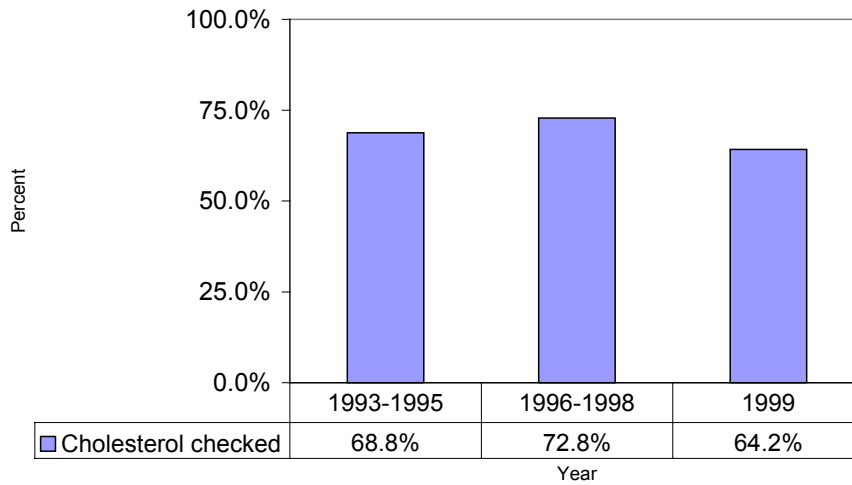
**Fig.30a : Respondents Who Ever Had Had Their Cholesterol Checked**



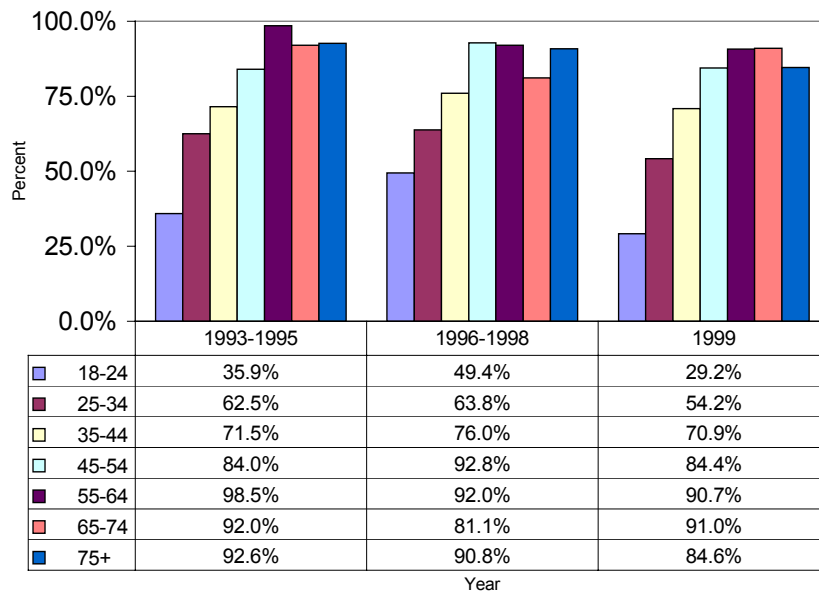
## Prevalence and Trends

Those respondents reporting that they ever had their blood cholesterol checked ranged from 68.8 percent in 1993-1995 to 64.2 percent in 1999 (Fig.30b).

**Fig.30b: Trend in "Ever had Cholesterol Checked"**



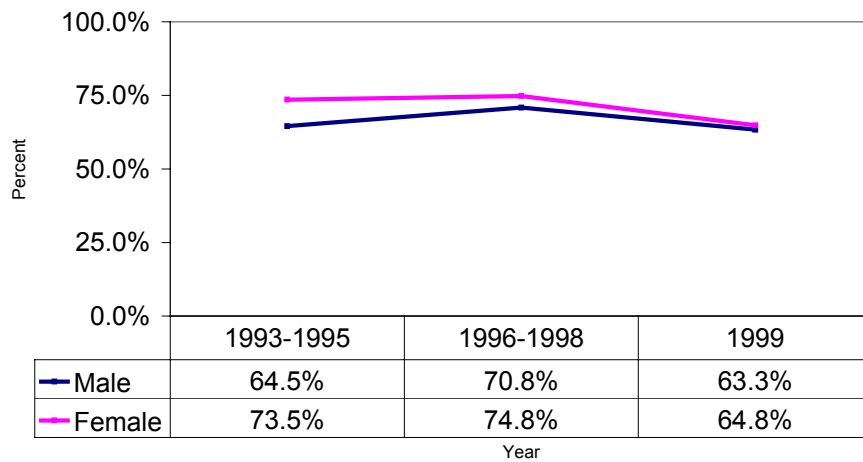
**Fig.30c: Trend in "Ever Had Cholesterol Checked by Age"**



As age increases, the proportion of adults who had their blood cholesterol checked increased. In 1999, 29.2 percent of adults aged 18-24 years, 54.2 percent of adults aged

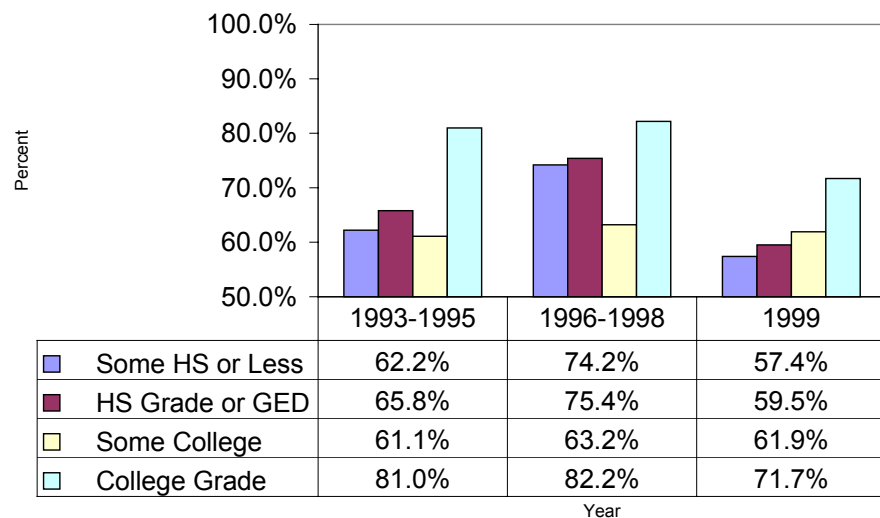
25-34 years, and 70.9 percent of adults aged 35-44 years reported ever having their blood cholesterol checked. Higher rates of high cholesterol level were observed among older population and these trends are true for the time period covered by this report (Fig.30c).

**Fig.31a : "Ever Had Blood Cholesterol Checked by Gender**



More Lancaster women (65%) than men (63%) had gone for their cholesterol level screening in 1999. The same was true in the 1993-1995 and 1995-1998 surveys (Fig.31a).

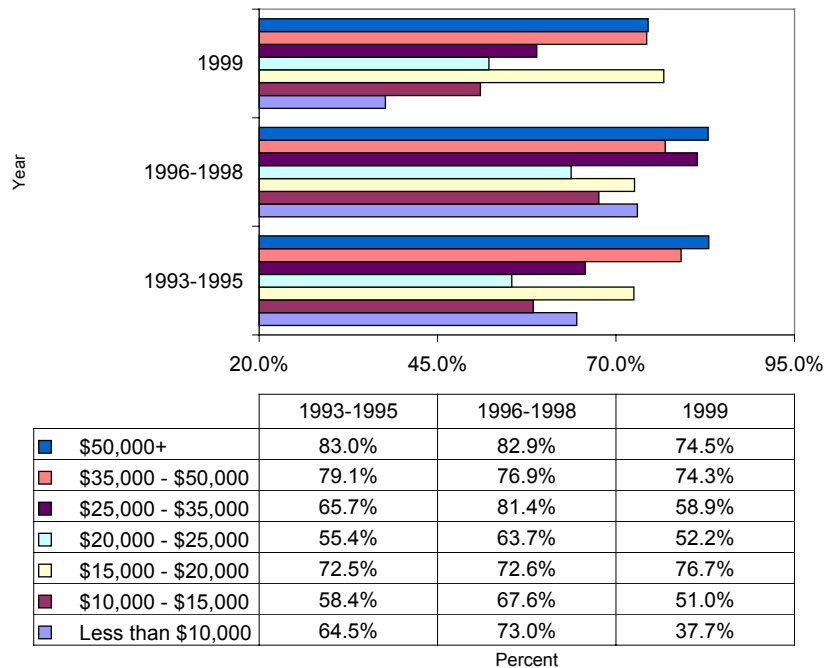
**Fig.31b: Ever Had Blood Cholesterol Checked by Education**



Respondents with higher education attainment seemed to be more concerned about detecting their cholesterol level than respondents with less education. Data analysis, regardless of year, revealed that a higher percentage of college graduates (71.7% in 1999) have ever had their blood cholesterol screened as compared to respondents of any other education level (Fig.31b).

The proportion of cholesterol screening recipients increased with higher annual household income levels. Nearly three-fourths (74.5%) of respondents with household incomes of \$50,000 or more, had their blood cholesterol checked, as compared to one-third (37.7%) respondents with household income of less than \$10,000 (Fig.32).

**Fig.32: Ever Had Blood Cholesterol Checked by Income**



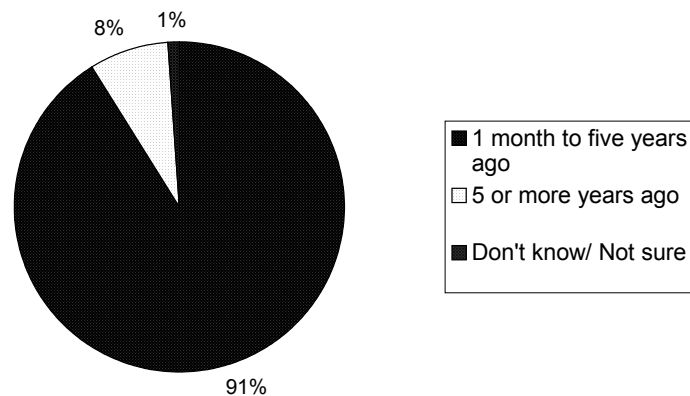
A similar trend was evident based on the race of BRFSS respondents. More whites (65.8%) than non-whites (39.5%) went to check their blood cholesterol level in 1999 (Table.10).

<b>Table 10: Ever Had Blood Cholesterol Checked by Race</b>			
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Race</b>			
White	70.6%	72.9%	65.8%
Non-White	45%	73.8%	39.5%

### Had Blood Cholesterol checked in past 5 years

In 1999, 9 out of 10 (90.7%, 95% CI, 88.5%-92.9%) respondents, who reported ever having their blood cholesterol checked, had their screening within the past five years (Fig.33a). Eight percent (95% CI, 6%-10.2%) had it checked 5 or more years ago, and only 1 percent (95% CI, 0.3%-1.3%) either did not know or were not sure about the when they had it checked.

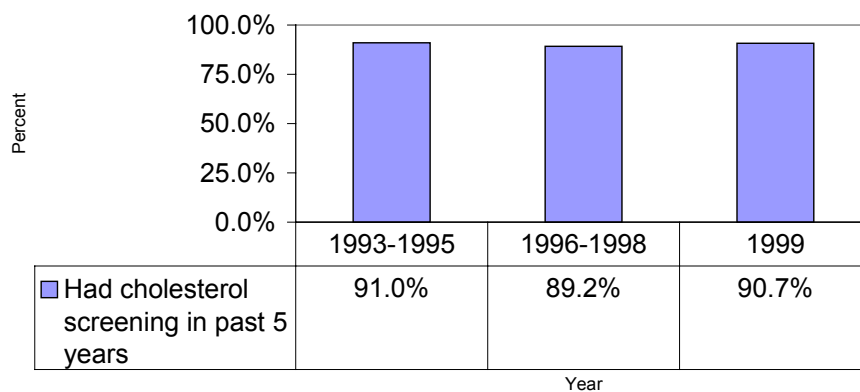
**Fig.33a: Respondents Who Had Blood Cholesterol Checked in Past Five Years**



### Trend and prevalence

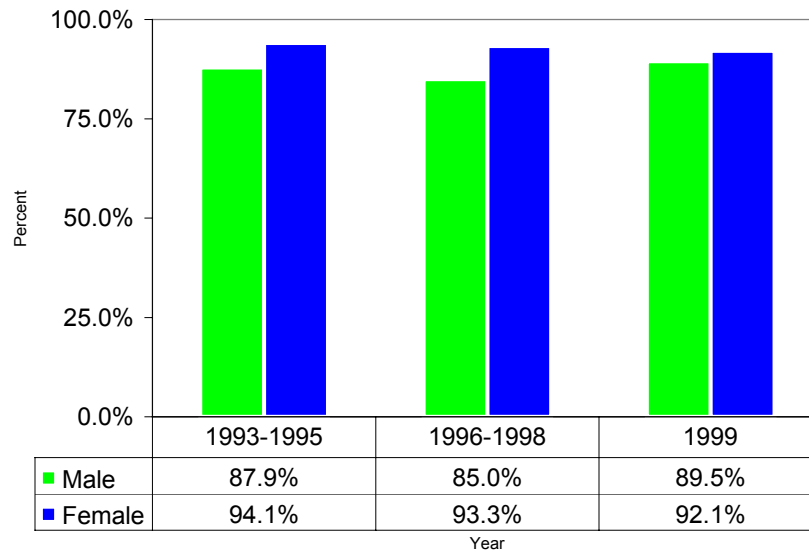
The proportion of respondents who had a cholesterol-screening test within last 5 years remained fairly stable over the last six years (Fig.33b).

**Fig.33b: Trend in "Had Cholesterol Screening in Past Five Years"**

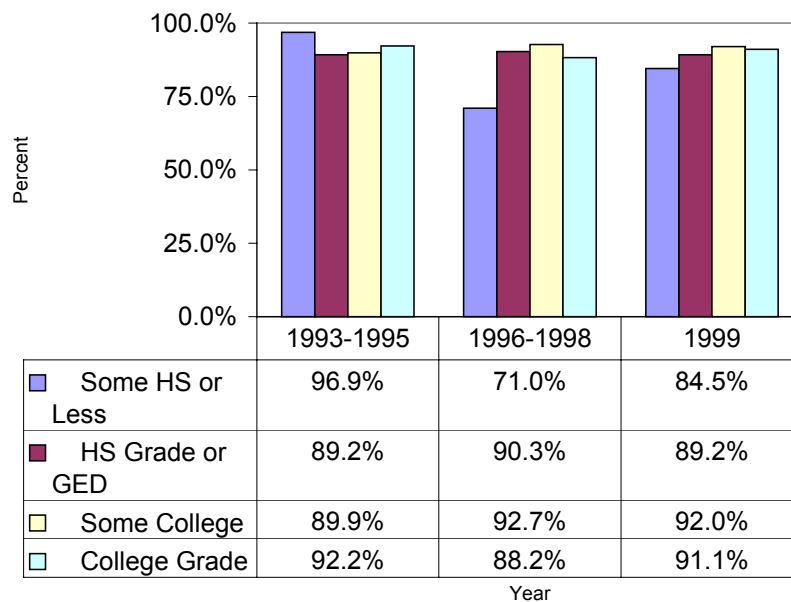


Despite high proportions for both sexes, women were more likely to have cholesterol screening within the past five years than men (Fig.34a). Ninety-two percent of women and 89.5 percent of men reported in 1999 that they had their cholesterol screening within the past five years.

**Fig.34a: Had Cholesterol Screening Within Past Five Years**



**Fig.34b: Had Cholesterol Screening in Past Five Years by Education**



The respondents who were less educated, were less likely to have cholesterol screening within the past five years (Fig 34b). In 1999, 91.1 percent of the respondents with college degrees reported having a blood cholesterol screening test within the 5 years preceding the survey. This rate was somewhat lower among respondents with less education (84.5% in adults with some high school or less education). However this pattern of correlation was not observed in the 1993-1995 and 1996-1998 period (Table 11).

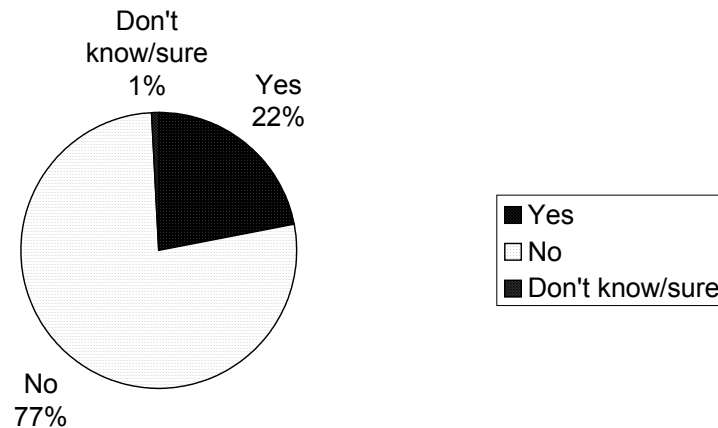
No other demonstrable trends were observed due to differences in age, race, and household income.

<b>Table 11: Had Cholesterol Screening in Past 5 Years</b>			
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Annual Household Income</b>			
Less than \$10,000	95.4%	79.3%	98.4%
* \$10,000 - \$15,000	98.4%	97.7%	97.6%
\$15,000 - \$20,000	84.0%	98.0%	89.0%
\$20,000 - \$25,000	96.7%	92.5%	89.4%
\$25,000 - \$35,000	82.4%	73.3%	93.1%
\$35,000 - \$50,000	92.8%	90.8%	85.1%
\$50,000+	94.2%	93.7%	90.8%
<b>Age Group</b>			
18-24	94.4%	85.5%	95.4%
25-34	87%	87.3%	89.6%
35-44	88.5%	86%	87.4%
45-54	96.9%	89.7%	85%
55-64	85.8%	99%	97%
65-74	91.5%	97.7%	92.6%
75+	100%	84.7%	96%
<b>Race</b>			
White	90.7%	67.5%	90.6%
Non-White	100%	67.9%	93.6%

### **Blood Cholesterol High**

More than one-fifth (22.1%, 95% CI, 19.1% - 25.1%) of all BRFSS respondents in 1999 reported that a doctor or other health professional told them that their blood cholesterol level was high (Fig 35a). Only 1 percent was uncertain about it.

**Fig.35a: Ever Told Blood Cholesterol High**



### **Prevalence and Trends**

The magnitude of high cholesterol level among adults in Lancaster County remained almost the same for the periods covered by this report.

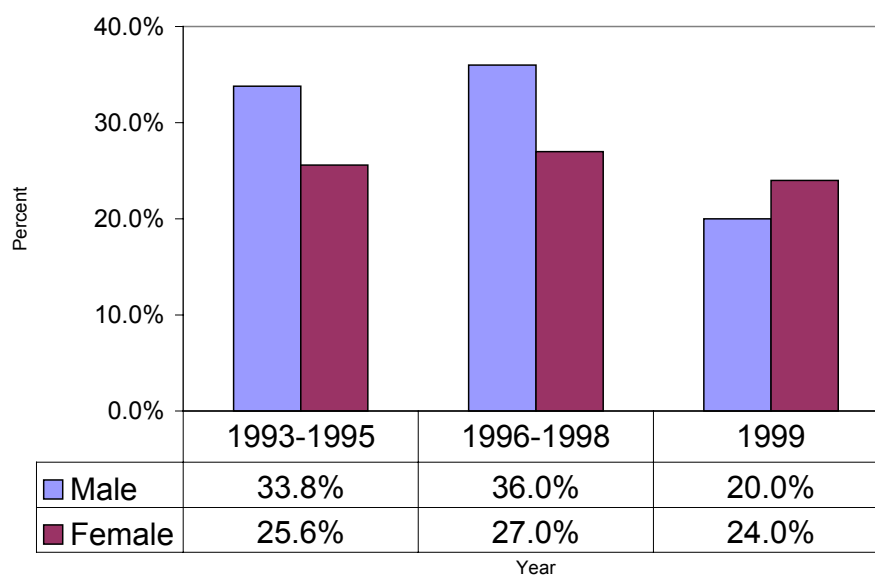
Each year, other than 1999 which showed little gender variation, a slightly higher percentage of males than females had ever been told their cholesterol level was high (Fig.35b).

Older adults aged 55 and over, comprised the largest segment of population with high blood cholesterol level (Fig 36). Only 3.5 percent of the younger adults, aged 18-24, were told their blood cholesterol level was high. In comparison, 30 percent of the adults aged 65-74 years, have been told they have high blood cholesterol levels.

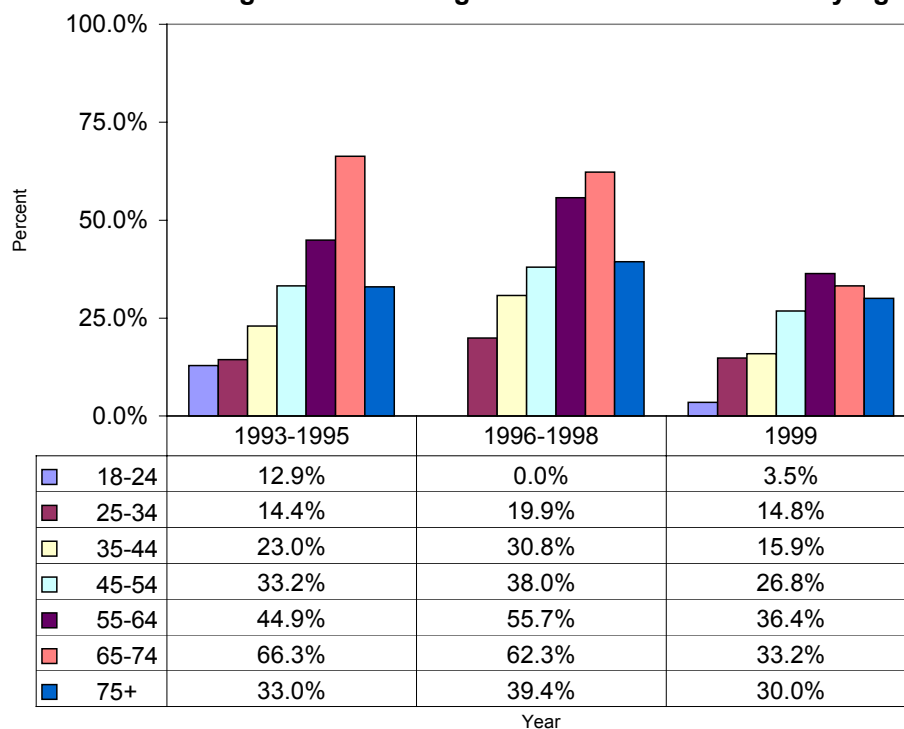
College graduates had a lower prevalence of high blood cholesterol than groups with less education (Fig.37).

Although prevalence of high blood cholesterol level among whites has declined significantly from the previous years (29.7% in 1993-1995 versus 22.2% in 1999), they consistently continued to have the higher rates than non-whites (Fig.38). A specific pattern of high blood cholesterol level by income category of the respondents was not seen in any year surveys (Table 12).

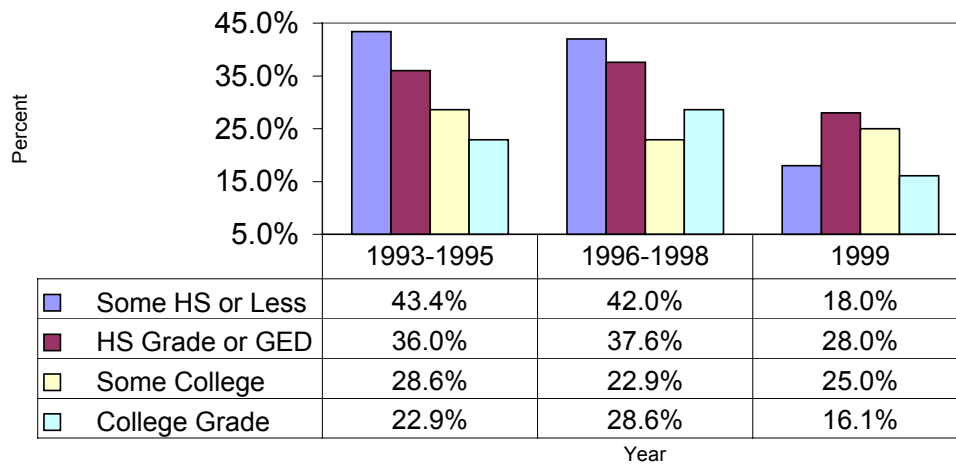
**Fig.35b: Prevalence of High Blood Cholesterol Level by Gender**



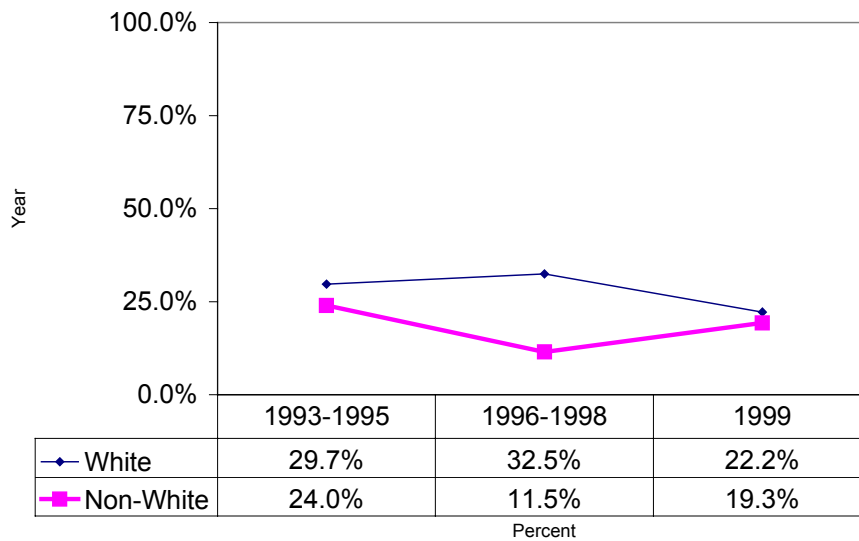
**Fig.36: Trend in High Blood Cholesterol Level by Age**



**Fig.37: Trend in High Blood Cholesterol Level**



**Fig.38: Prevalence of High Blood Cholesterol Level by Race**



<b>Table 12: Have High Blood Cholesterol Level</b>			
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Annual Household Income</b>			
Less than \$10,000	37.9%	15.1%	14%
\$10,000 - \$15,000	26.5%	40.1%	21.3%
\$15,000 - \$20,000	28.6%	13.4%	23.6%
\$20,000 - \$25,000	20.4%	45.7%	17.6%
\$25,000 - \$35,000	26.5%	35%	27.1%
\$35,000 - \$50,000	27.1%	39.8%	23.3%
\$50,000+	29.6%	20.8%	19%

## **Prevalence of Cigarette Smoking**

Tobacco use is the single most preventable risk factor associated with death and disease. Tobacco is a vehicle of nicotine delivery and contains about 2,000 chemical, including tar, a potential chemical carcinogen. Every year in this country approximately 400,000 deaths occur as a result of tobacco use. Health problems related to tobacco use include cancers, lung disease, heart disease and many more. The CDC reports that cigarette smoking is responsible for an estimated 87 percent of lung cancer deaths, 30 percent of all cancer deaths, and 21 percent of all coronary heart disease. There were 2,703 deaths linked to smoking in the State of Nebraska in 1997. Pregnant women who smoke can harm their fetuses resulting in a higher risk for premature birth, low birth weight, and other health problems. In addition, smokeless tobacco products (snuff and chewing tobacco) are a growing concern, especially among young adults. According to the U.S. Department of Agriculture, Americans used about 60 million pounds of smokeless tobacco products in 1993, up from 53 million pounds in 1990. Regular use of smokeless tobacco can be attributed to gum disease, tooth decay, loss of teeth, and the development of precancerous and cancerous growths in the oral cavity.

Healthy people 2010, identified tobacco reduction objectives as priorities for improving the nation's health. Consequently, state and local health agencies closely monitor tobacco use and its correlated disease outcomes. This section of the report summarizes county specific findings resulting from current cigarette and current smokeless tobacco use by adults.

The BRFSS respondents were asked, "Have you smoked at least 100 cigarettes in your entire life?" and "Do you now smoke cigarettes everyday, some day, or not at all?" Current smokers were defined as persons who reported having smoked at least 100 cigarettes during their lifetime and who currently smoke every day or some days. To determine current smokeless tobacco use respondents were asked, "Do you currently use any smokeless tobacco products such as chewing tobacco or snuff?"

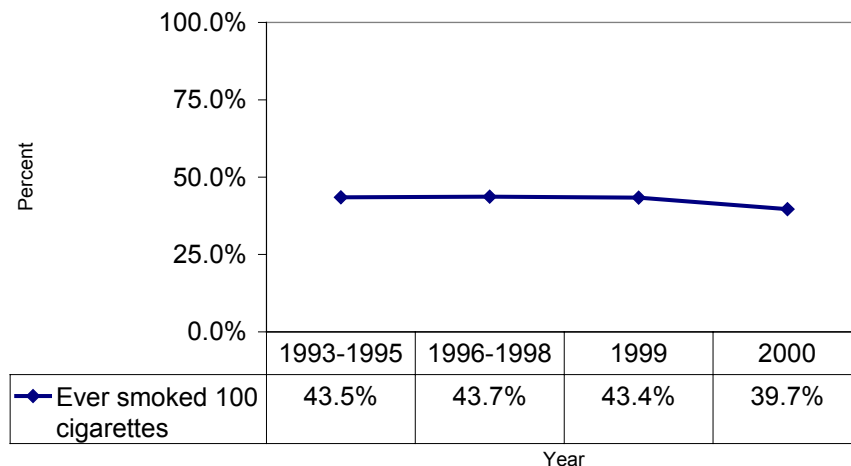
### **Ever Smoked 100 Cigarettes**

Four out of every ten adults (39.7%, 95% CI, 37.12% - 42.28%), surveyed in the 2000 Lancaster BRFSS, said they had smoked at least 100 cigarettes in their entire life.

### **Prevalence and trends**

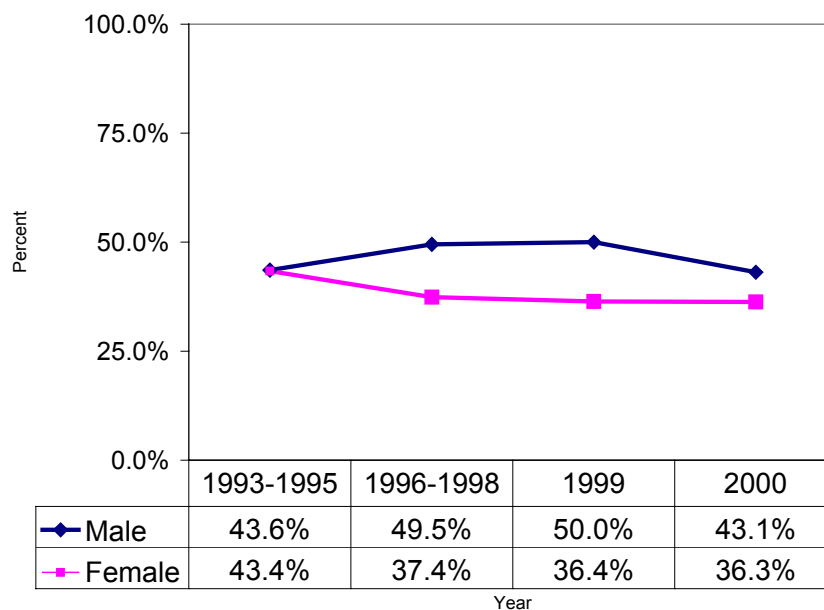
The proportion of adults who reported smoking at least 100 cigarettes in their entire life has dropped by an average of 3.8 percent in 2000 after maintaining a steady trend in the previous BRFSS surveys (Fig.39).

**Fig.39: Trend in Ever Smoked 100 Cigarettes**



In every survey year, men were more likely to smoke cigarettes than women ranging from 43.6 percent of men and 43.4 percent of women in 1993-1995 to 43.1 percent of men and 36.3 percent of women in 2000 (Fig.40). The age group of 45 to 64 consistently showed the greatest likelihood of being regular smokers at some point in their lives (Fig.41).

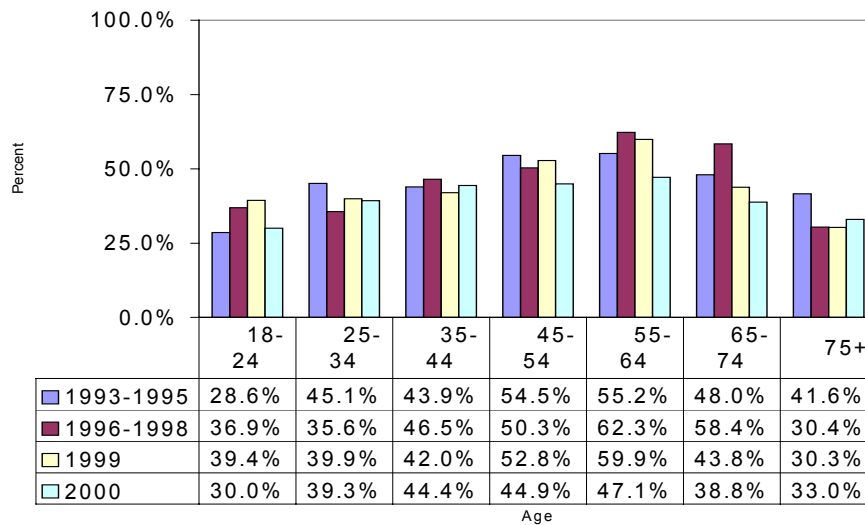
**Fig.40: Ever Smoked Cigarettes by Gender**



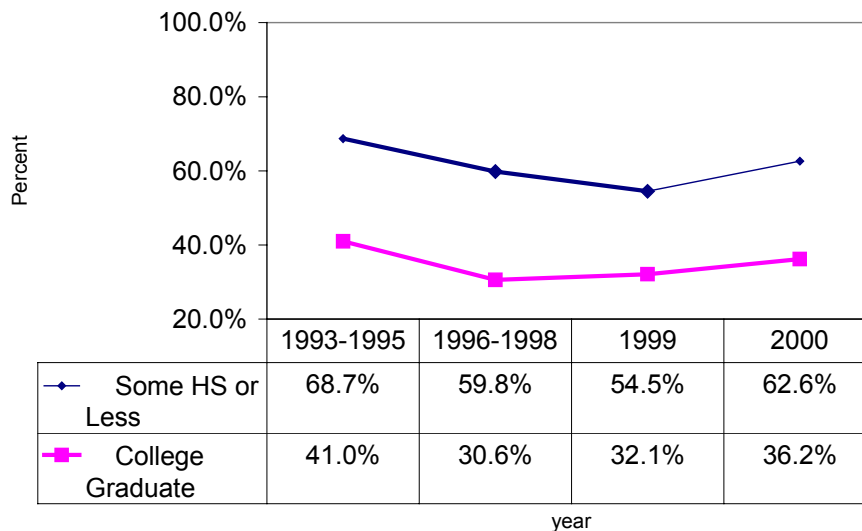
Education level appeared to have played an influential role on a person's smoking status; only 36.2 percent of college educated respondents reported smoking cigarettes compared

to 62.6 percent of respondents of some high school or less education in 2000 survey. This wide margin of difference between these two education groups was evident in all survey periods (Fig.42). No consistent trend was evident when data was evaluated by income or race (Table 13).

**Fig.41: Prevalence of Ever Smoked Cigarettes by Age Group**



**Fig.42: Prevalence of Ever Smoked Cigarettes in Two Education Groups**

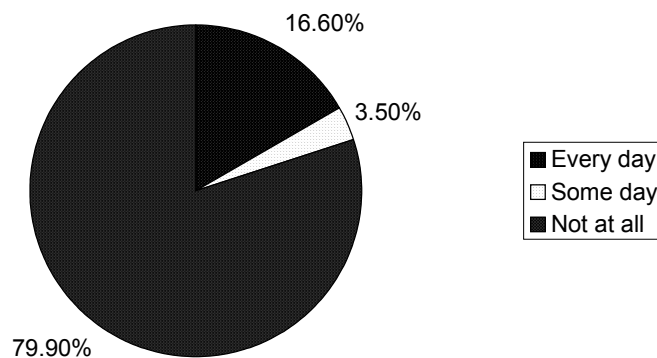


<b>Table 13: Ever Smoked 100 Cigarettes</b>				
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Highest Grade Completed</b>				
Some HS or Less	68.7%	59.8%	54.5%	62.6%
Some College	38%	46.2%	41.8%	41.1%
College Grade	41%	30%	32.1%	36.2%
<b>Annual Household Income</b>				
Less than \$10,000	30.5%	46.9%	40.3%	39.7%
\$10,000 - \$15,000	41.6%	53.9%	49.7%	30.3%
\$15,000 - \$20,000	43.6%	44.7%	38.6%	43.8%
\$20,000 - \$25,000	51.4%	38.3%	50.8%	49.7%
\$25,000 - \$35,000	47.1%	50.5%	59.6%	42.8%
\$35,000 - \$50,000	55%	49.3%	35.1%	43%
\$50,000 +	39.8%	38.7%	42.8%	36.6%
<b>Race</b>				
White	43.8%	43%	44%	39.6%
Non-White	41%	55.2%	36.4%	42.3%

### Current Smoker

In 2000, one-fifth (20.1 %, 95% CI, 18% - 22.2%) of Lancaster County adults representing nearly 38,484 people (18 and older) currently smoked cigarettes at the time

**Fig.43: Prevalance of Current Smoker by Response**

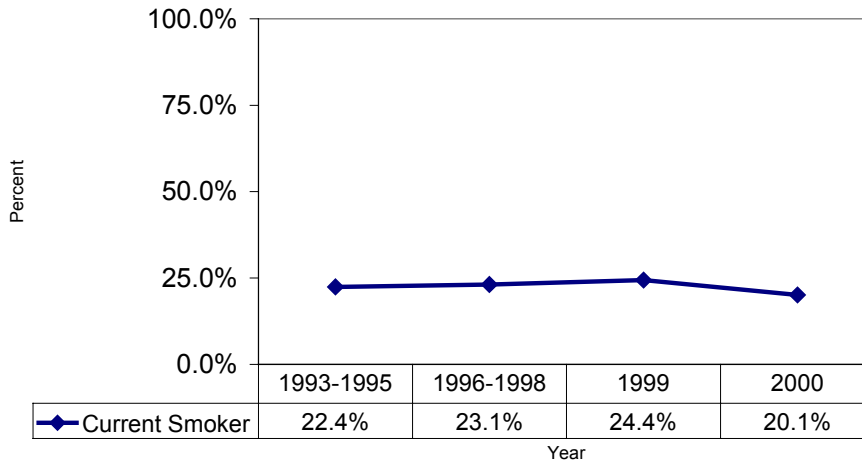


of survey. Figure 43 shows percent of current smokers according to their response: “Every day,” “Some day,” and “Not at all.” Those respondents who are considered current smokers (both every day and some day combined) smoked an average of 16 (95% CI, 15-17) cigarettes a day (one pack contains 20 cigarettes).

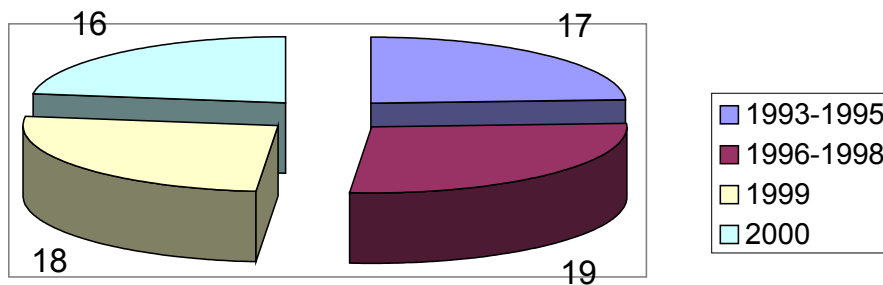
### Prevalence and Trends

The percentage of current smokers steadily increased from 22.4 percent in 1993-1995 to 24.4 percent in 1999. It then declined to 20.1 percent in 2000 (Fig.44a). Average number of cigarette consumption per day reported by these smokers ranged from 16 in 1993-1995 to 19 in 2000 (Fig.44b).

**Fig.44a: Trend in Current Smoker**

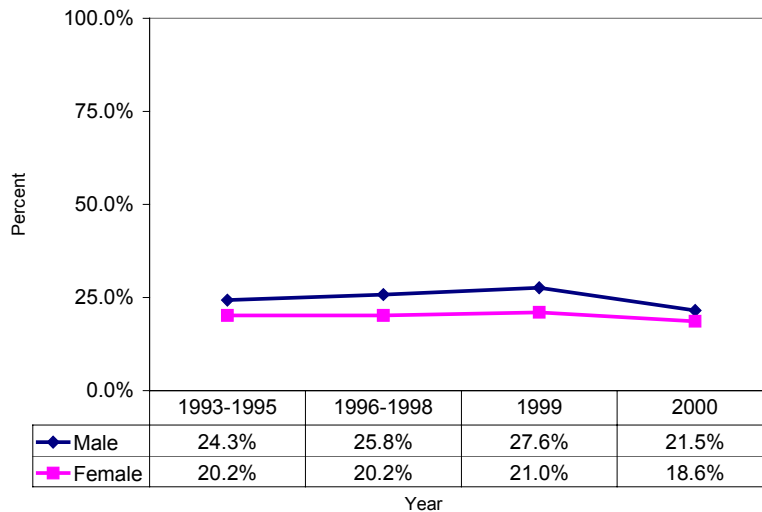


**Fig.44: Trend in Average Number of Cigarettes Smoked**



Lancaster County has more men who currently smoke than women who currently smoke. Approximately 22 percent of men and 19 percent of women fell into the “current smoker” category in 2000. A seven-year trend showed consistently higher numbers of men who smoke than women who smoke (Fig.45). Men smoked an average of 17 cigarettes a day while women smoked 15 (Table 14).

**Fig.45 : Trend in Current Smokers by Gender**



Disparities in current smoking status also existed among people of different educational levels and racial groups. The prevalence of current smokers showed an inverse relationship with educational level. College graduates were three times less likely (12.9%) to smoke than people with some high school or less education (42.1%). They were also two times less likely than high school graduates (24.7%) to be a current smoker. This inverse relationship was also observed in the previous survey years (Fig.46)

**Fig.46: Prevalence of Current Smoker by Education**

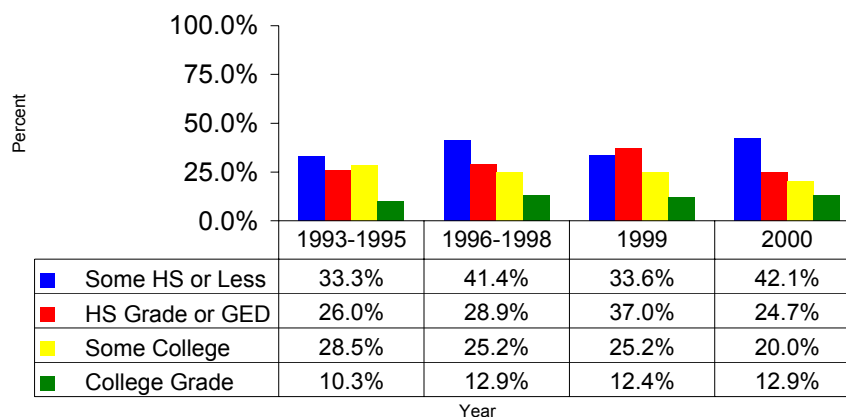
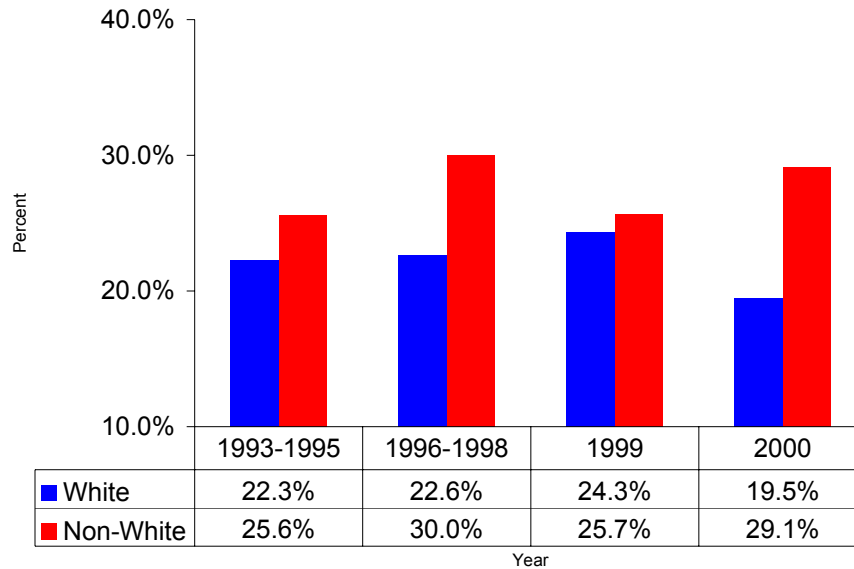
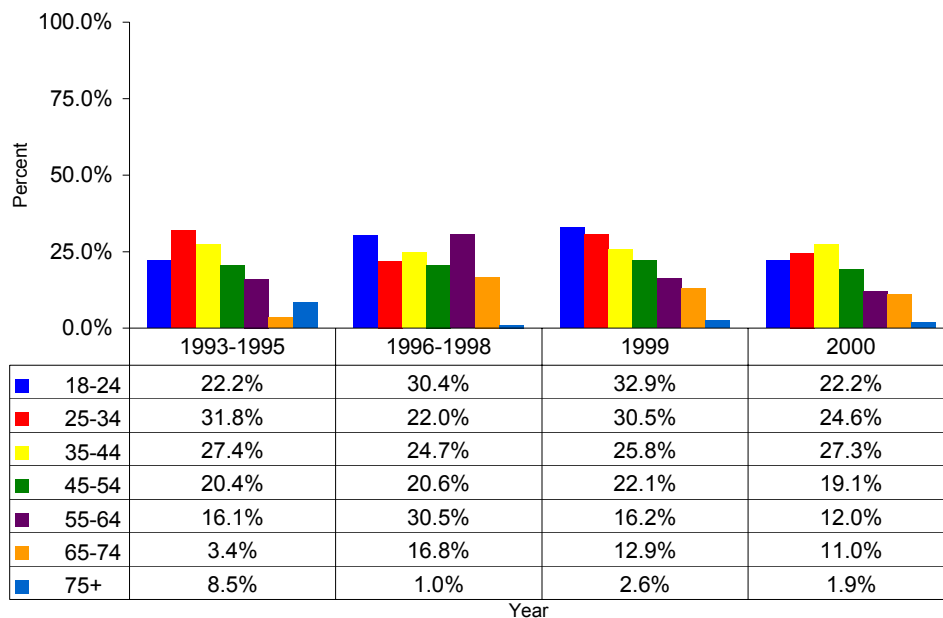


Figure 47 shows trends in current smoking status by racial groups. Regardless of survey years, smoking prevalence was somewhat higher among Lancaster non-whites than whites. In 2000, the rate was 29.1 and 19.5 percent for non-whites and whites respectively. Despite higher proportion of non-white current smokers, white respondents reported smoking more cigarettes than non-white respondents (Table 14). In 2000, the average difference between white and non-white was 16 and 13 cigarettes, respectively.

**Fig.47: Trend in Current Smoker by Race**

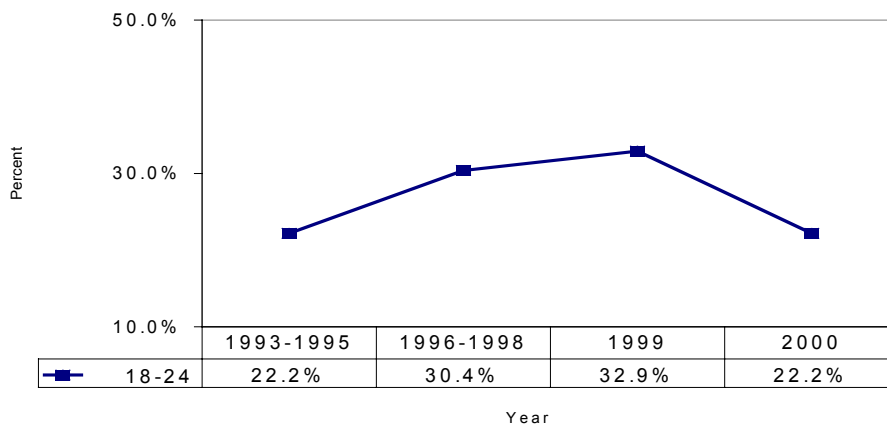


**Fig.48a: Trend in Current Smoker by Age**



Increasing age was aided with decreasing smoking level. The lowest proportion of current smokers was, adults of 75 years or over (1.9%) as compared to more than one-fifth of adults (22.2%) of aged 18-24 years (Fig.48a).

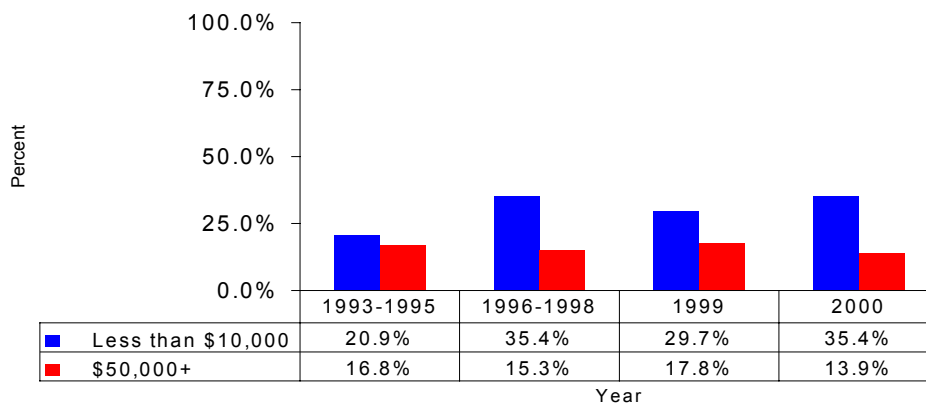
**Fig.48b: Trends in Current Smoker Among Adults Aged 18-24**



The prevalence of smoking among young adults aged 18-24 substantially increased from 22.2 percent in 1993-1995 to 32.9 percent in 1999. However, in 2000 smoking in this age group again returned to 22.2 percent (Fig.48b).

When annual household income was taken into account, there were considerable differences in the current smoking status between income of \$50,000 or more and less than \$10,000. The differences were evident in both current and previous surveys (Fig.49). More than one-third of respondents (35.4%) with an income of less than \$10,000 reported to be current smokers in 2000. This rate was only 13.9 percent for income groups of \$50,000 or more.

**Fig.49: Trend in Current Smoking Status Between Two Income Groups**



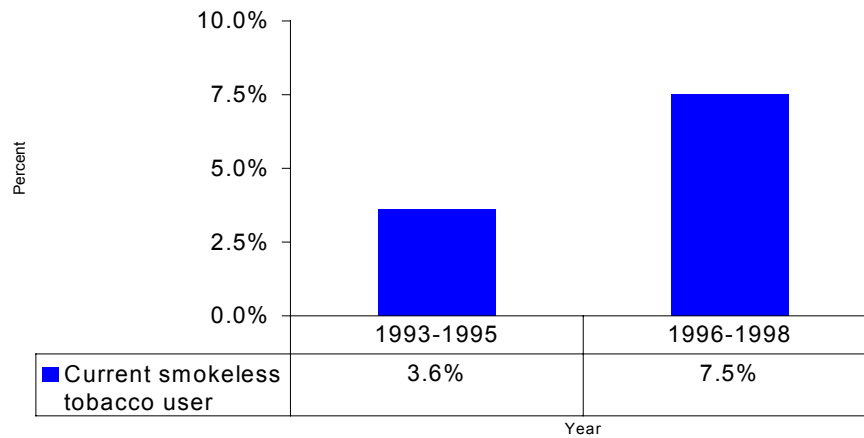
<b>Table 14: Average Number of Cigarette Smoked by Current Smokers</b>				
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Annual Household Income</b>				
Less than \$10,000	12	16	17	16
\$10,000 - \$15,000	18	13	18	15
\$15,000 - \$20,000	19	17	12	16
\$20,000 - \$25,000	17	18	18	18
\$25,000 - \$35,000	16	20	17	15
\$35,000 - \$50,000	17	20	22	18
\$50,000 +	18	17	16	17
<b>Age Group</b>				
18-24	13	18	15	13
25-34	18	17	16	17
35-44	18	19	20	16
45-54	18	21	23	18
55-64	14	19	23	19
65-74	15	17	20	14
75+	12	20	20	8
<b>Sex</b>				
Male	17	20	19	17
Female	17	16	16	15
<b>Race</b>				
White	17	19	18	16
Non-White	11	14	14	13

## Smokeless Tobacco Use

### Prevalence and Trend

In the 1996-1998 survey period, 7.5 percent (95% CI, 4.5% - 10.5%) of adults reported that they were currently using smokeless tobacco such as chewing tobacco or snuff (Questions on smokeless tobacco use were not asked in the 1999 and 2000 surveys). Smokeless tobacco use among Lancaster County residents (18 years and above) has gone up two-fold since the 1993-1995 survey period (Fig.50).

**Fig.50: Current Smokeless Tobacco User**



Smokeless tobacco use was much higher among men (4.1%) than women (0.7%) and non-whites (6.6%) than whites (2.2%). Over the years, use of smokeless tobacco has declined among the white population and increased among the non-white populations (Fig.51).

**Fig.51: Trend in Current Smokeless Tobacco Use by Race**

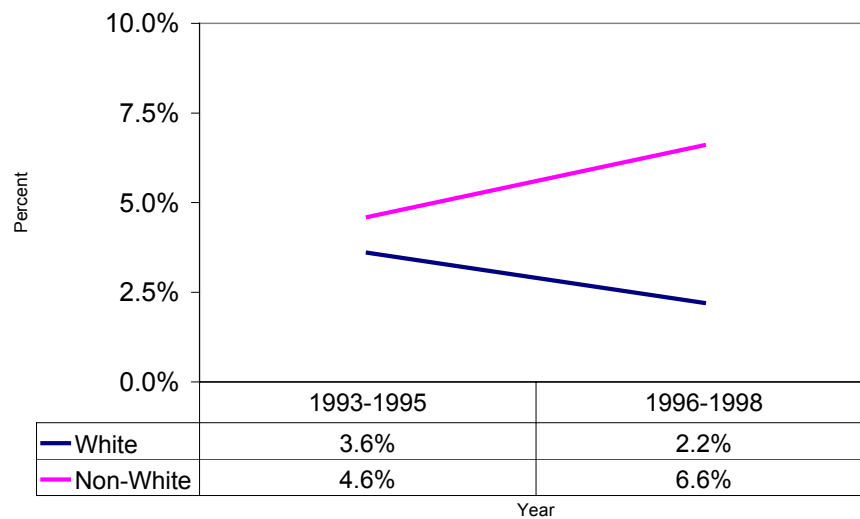


Table 15 presents the smokeless tobacco use by age, income, and education level of the BRFSS survey respondents.

<b>Table 15: Current Smokeless Tobacco Use</b>		
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>
<b>Age Group</b>		
18-24	4.9%	6.1%
25-34	4.7%	2.7%
35-44	3.6%	0.4%
45-54	1.2%	1.6%
55-64	4.4%	1.1%
65-74	3.3%	2.5%
75+	0%	0%
<b>Annual Household Income</b>		
Less than \$10,000	8.9%	0%
\$10,000 - \$15,000	3.1%	13.5%
\$15,000 - \$20,000	4.6%	5.3%
\$20,000 - \$25,000	4.2%	0.7%
\$25,000 - \$35,000	3%	2%
\$35,000 - \$50,000	7.2%	1.5%
\$50,000+	0%	2.5%
<b>Highest Grade Completed</b>		
Some HS or Less	11.4%	3.4%
HS Grade or GED	1.3%	2.6%
Some College	2.9%	3.4%
College Grade	5.1%	1.2%

## **Alcohol Misuse**

Alcohol use among U.S. adults is a topic of considerable public health importance. The toll alcohol exacts on society, individual health, and the economy is staggering. The adverse effects of excessive consumption of alcohol are well documented. Annually, about 100,000 deaths in the United States are linked to alcohol consumption. Abuse of alcohol has been linked to a variety of diseases including heart disease, liver, oral and esophageal cancer, hepatitis, gastrointestinal disorders, cirrhosis of the liver, and mental illness. Alcohol is estimated to be a factor in half of all motor vehicle fatalities. According to the National Highway Traffic Safety Administration (NHTSA), over 40% of the total traffic fatalities in 1995 and 1996 were alcohol-related. In addition, alcohol use by pregnant women can adversely affect birth outcomes, resulting in low birth weight or babies born with fetal alcohol syndrome. From a public health perspective, alcohol use is a complex behavior involving biological, psychological, and social processes.

Questions on the BRFSS address different measures of alcohol consumption. Respondents were asked if they have had at least one drink of any alcoholic beverage such as beer, wine, wine coolers, or liquor in the past month, and those answering "yes" were considered current drinkers. Three other questions were also asked to measure chronic drinking, acute or binge drinking and drinking and driving. Acute (binge) drinking represents excessive drinking within an isolated time frame; at risk respondents had five or more alcoholic drinks on a single occasion. Chronic drinking occurs over an extended period of time; those at risk for chronic drinking consume on the average two or more drinks per day, i.e., 60 or more drinks per month. These chronic drinkers increase their chances of cirrhosis of the liver. BRFSS respondents who are at risk for drinking and driving reported that one or more times they have driven after perhaps having too much to drink.

Questions on alcohol consumption were not asked in the 2000 survey as these questions are part of the "rotating core."

### **Current Alcohol Use**

In 1999, 105,389 adults of 18 years (58%) and over had at least one drink of an alcoholic beverage in the month prior to the survey (95% CI, 55% -61%).

### **Prevalence and Trend**

The percentage of Lancaster BRFSS respondents who reported having one drink in the past month in the 1993-1995 and 1996-1998 were 63.4 percent and 63.6 percent respectively. More men (61.4%) than women (54.4%), more whites (59.5%) than non-whites (35%) and more younger (67% of adults aged 18-24 years) than older (28% of adults aged 75 or more) respondents reported to have consumed alcohol in the past month (Table 16).

**Table 16: Consumed at least One Drink in The Past Month**

Years	1993-1995	1996-1998	1999
<b>SEX</b>			
Male	73.2%	66.6%	61.4%
Female	52.7%	60.3%	54.4%
<b>Race</b>			
White	63.6%	63.4%	59.5%
Non-White	58%	67.6%	35%
<b>Age Group</b>			
18-24	74.4%	76.4%	67.6%
25-34	70.6%	71.6%	67.3%
35-44	72%	64.3%	59.7%
45-54	59.1%	61.1%	56.1%
55-64	56.6%	63.9%	46.9%
65-74	40.8%	52.9%	42.9%
75+	28.3%	13.8%	28.1%

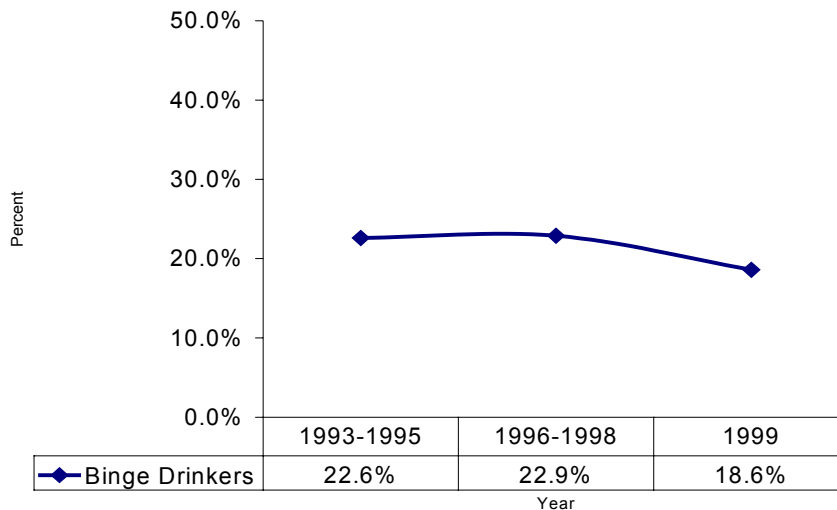
## Binge Drinking

The BRFSS defines binge drinking as having five or more drinks on one occasion, one or more times during the month prior to survey. About 18.6 percent (95% CI, 16.2% - 21%) of the adults in the Lancaster County were “binge drinkers”. This number represents an estimated 33,797 adults (18.6 percent of 18,1705 adult population in 1999) in the County.

### Prevalence and Trends

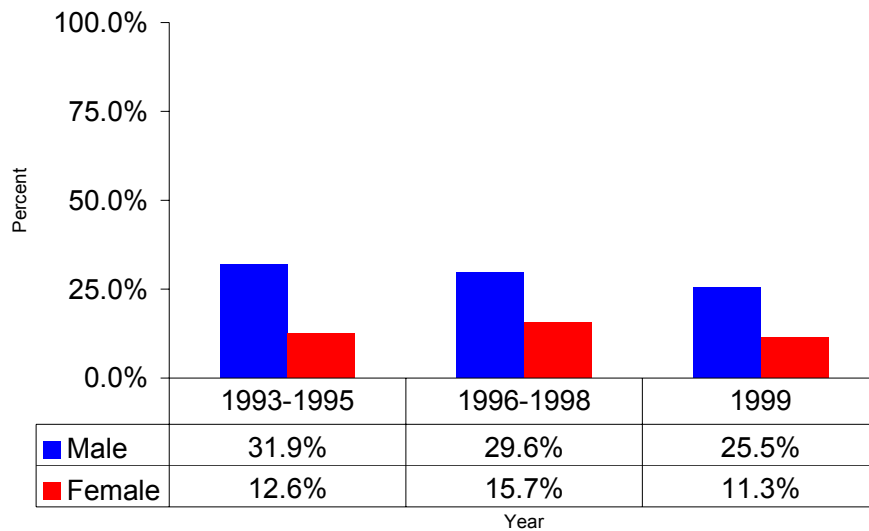
The proportion of binge drinkers has decreased by approximately 4 percent in 1999, after maintaining steady rates (around 22%) over the past few years (Fig.62).

**Fig.62: Trend in Binge Drinkers**



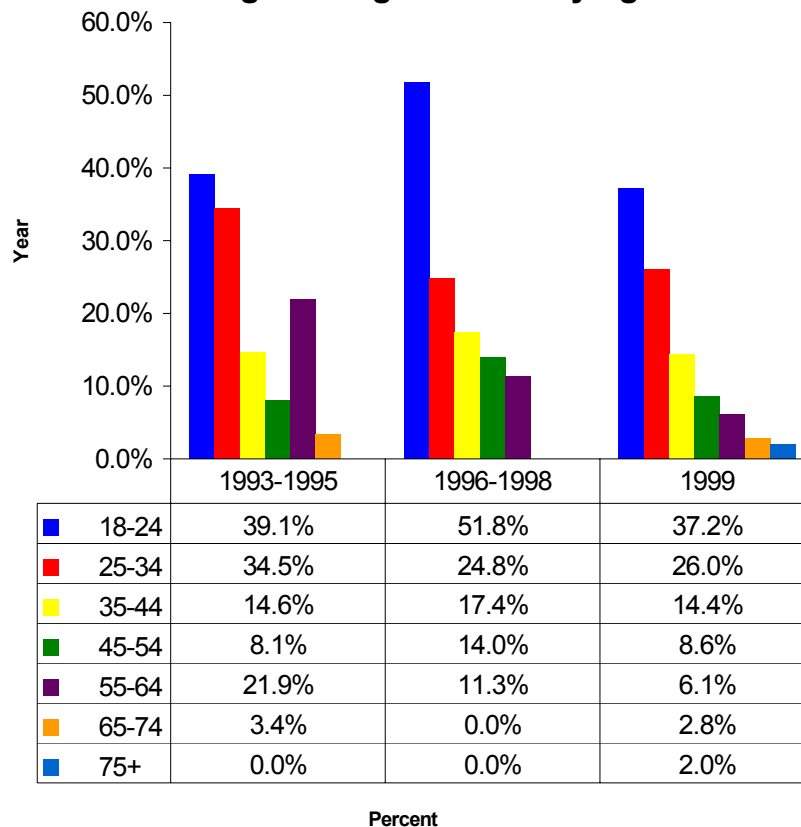
There were significant gender and age differences among the respondents. More than one-fourth (25.5%) of men respondents reported binge drinking compared to little over one-tenth (11.30%) of women (Fig.63).

**Fig.63: Binge Drinking by Gender**



Young people (18 to 24 years of age) were more prone to engage in binge drinking. In 1999, more than one-third (37.2%) of the respondents of this age group reported binge

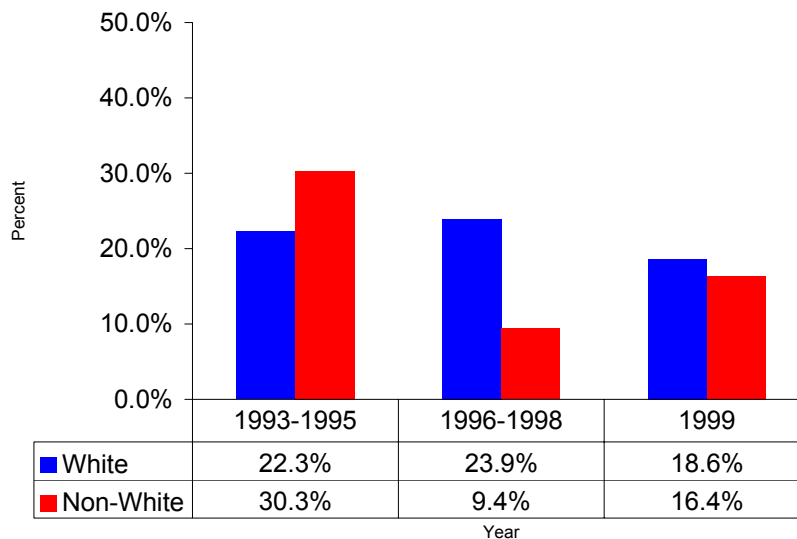
**Fig.64: Binge Drinkers by Age**



drinking. Conversely only 2 percent of adults age 75 or more reported such drinking behavior. Younger age group's predilection for binge drinking was evident in a period covered by this report (Fig.64).

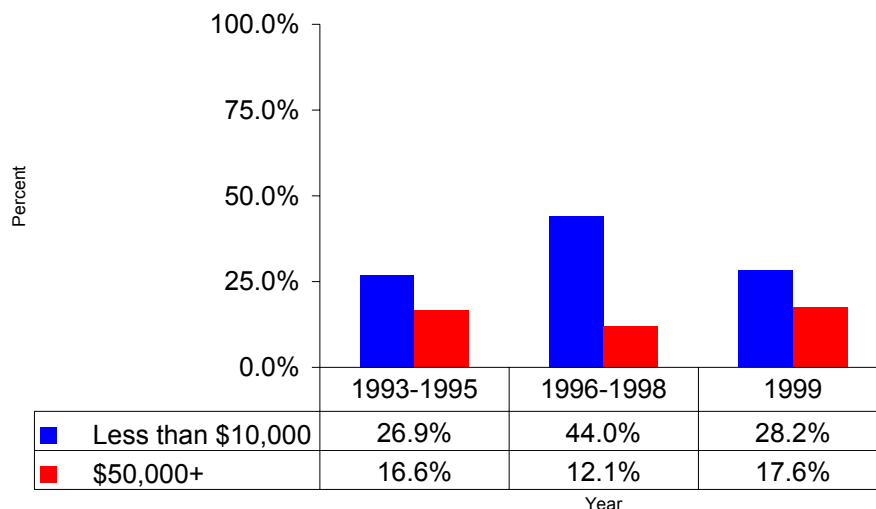
Whites (18.6 percent) were more likely to report binge drinking than non-whites (16.4%). However, in 1993-1995 survey period, more non-white (30.3%) than whites (22.3%) reported such pattern of drinking (Fig.65).

**Fig.65: Binge Drinking by Race**



A considerable difference in drinking habits were observed according to respondents education and income level. Approximately 21 percent of respondents with “some high school or less education” reported consuming five or more drinks of alcohol on an

**Fig.66: Binge Drinking by Income**



occasion one or more times during the past month as compared to only 13.3 percent of college graduates (Table 17). Only 17.6 percent of adults earning \$50,000 or more were classified as binge drinkers in comparison to 28.2 percent of adults with less than \$10,000 income. This remarkable difference between high income and low income was evident throughout the periods covered by this report (Fig.66).

<b>Table 17: Binge Drinking</b>			
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Highest Grade Completed</b>			
Some HS or Less	0%	33.3%	20.6%
HS Grade or GED	29.4%	20.3%	13.5%
Some College	27.8%	31.1%	27.9%
College Grade	15.9%	12.8%	13.3%
<b>Annual Household Income</b>			
Less than \$10,000	26.9%	44%	28.2%
\$10,000 - \$15,000	24.7%	23%	21.6%
\$15,000 - \$20,000	25.1%	51.5%	20%
\$20,000 - \$25,000	33.7%	18%	19.8%
\$25,000 - \$35,000	22.3%	18.6%	22.9%
\$35,000 - \$50,000	24%	19.6%	17.6%
\$50,000+	16.6%	12.1%	17.6%

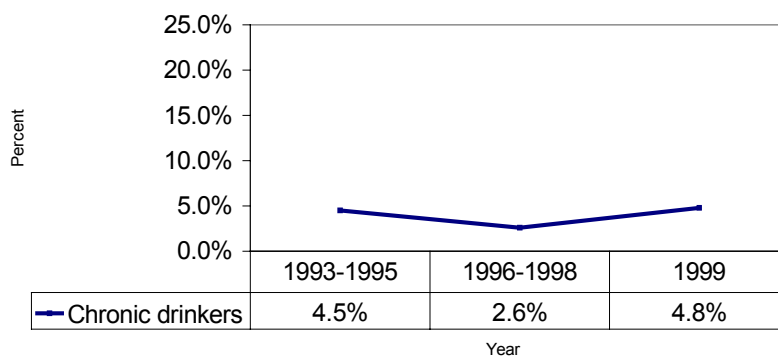
## Chronic Drinking

In 1999, an estimated 4.8 percent (95% CI, 3.4%- 6.2%) of Lancaster County adults (about 8,722 people) reported consuming 60 or more alcoholic drinks in the past month. This self-reported consumption level is defined as “chronic drinking.”

### Prevalence and Trends

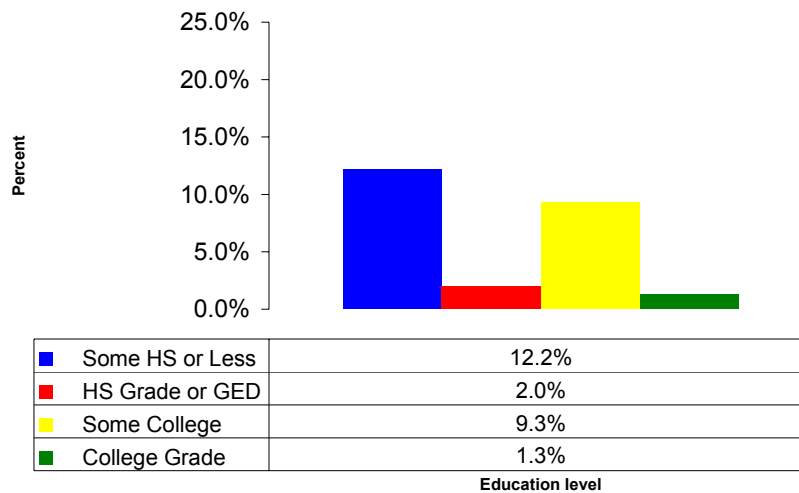
The prevalence estimated from the 1993-1995 surveys was 4.5 percent. It then dropped to 2.6 percent in 1996-1998 surveys and then again reached 4.8 percent in 1999, demonstrating an inconsistent trend (Fig.67).

**Fig.67: Trend in Chronic Drinking**



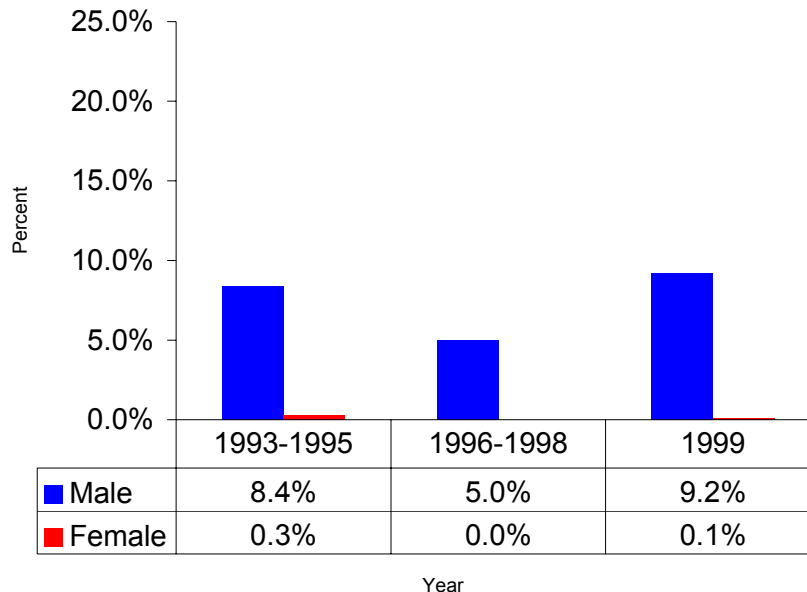
In 1999, adults whose highest education attainment was “some high school or less,” had the highest estimated prevalence of chronic drinking (12.2%), whereas 1.3 percent of adults with a college degree reported this behavior (Fig.68).

**Fig.68: Chronic Drinking by Respondent's Education Level**



As with binge drinking, the chronic drinking rate was higher among men (9.2%) than among women (0.10%, Fig.69).

**Fig.69: Chronic Drinking by Gender**



The rate of chronic drinking was somewhat higher among respondents aged 18-24 years (16%) than among respondents aged 65-74 years (1.3%, Table 18). The rates did not demonstrate any particular trends by race or income level.

<b>Table 18: Chronic Drinking</b>			
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Annual Household Income</b>			
Less than \$10,000	0%	0%	8.1%
\$10,000 - \$15,000	9%	0%	8.3%
\$15,000 - \$20,000	7.4%	12.1%	4.1%
\$20,000 - \$25,000	5%	1.5%	8.9%
\$25,000 - \$35,000	7.4%	7.2%	3.6%
\$35,000 - \$50,000	6.3%	0%	4%
\$50,000+	0.4%	1.7%	4.5%
<b>Age Group</b>			
18-24	7.8%	7.2%	16%
25-34	9.7%	0%	2.9%
35-44	0.9%	0%	2%
45-54	0%	5.7%	30%
55-64	3.6%	0%	0.9%
65-74	0%	0%	1.3%
75+	0%	4%	0%
<b>Race</b>			
White	4.2%	2.7%	4.9%
Non-White	10%	0%	0%

## Drinking and driving

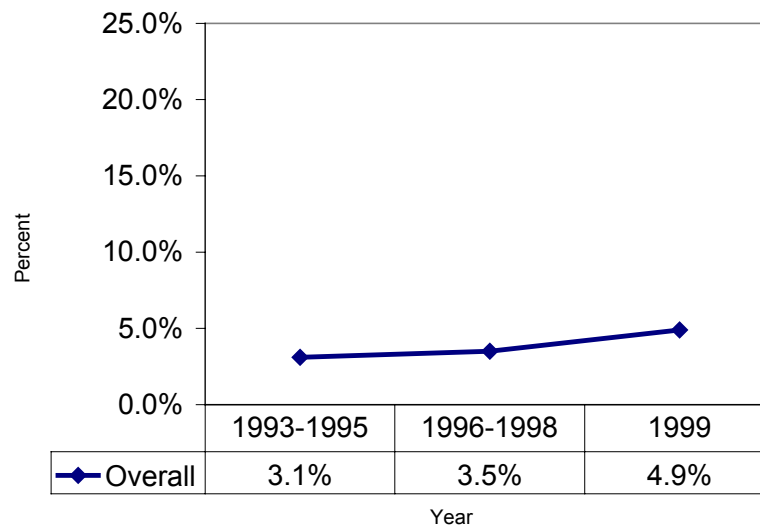
One out of every twenty (4.9%, 95% CI, 3.5% - 6.3%) adults in Lancaster County had driven after drinking too much alcohol in the month prior to the 1999 survey, comprising a total of 8,903 adults.

### Prevalence and Trends

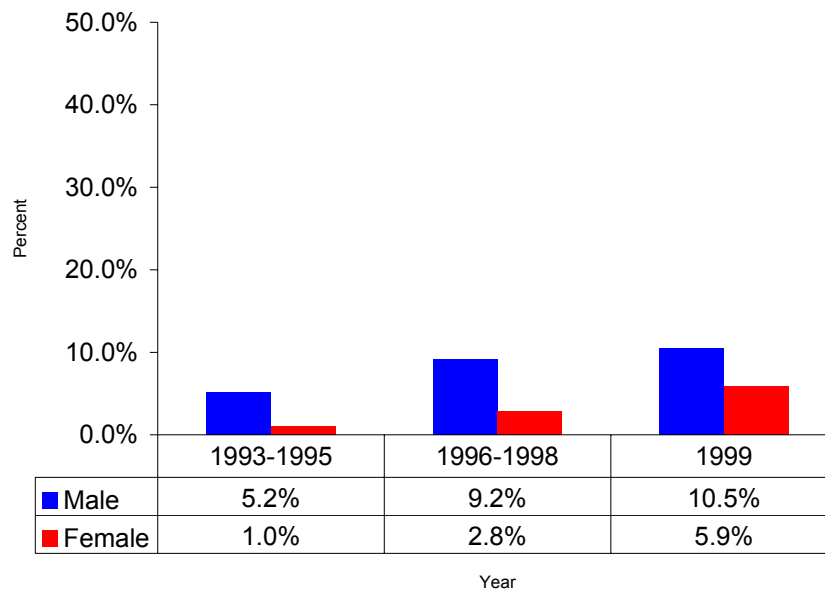
The rate of drinking and driving increased substantially over the past seven years. In 1993-1995, only 3.10 percent reported drinking and driving. This rate then increased slightly to 3.5% in the 1996-1998 period and then again sharply increased to 4.9 percent in 1999 (Fig 70).

Once again more men (10.5%) than women (5.9%) were involved in this type of high-risk behavior. Comparative prevalence ratios of drinking and driving between men and women were almost five (5.2%/1%) in 1993-1995, four in 1996-1998 (9.2%/2.8%) and nearly two (10.5%/5.9%) in 1999. Despite these reducing ratios between the sexes, the prevalence of driving while intoxicated has increased dramatically overall in the survey periods covered in this report for both sexes (Fig.71).

**Fig.70: Trend in Drinking and Driving**



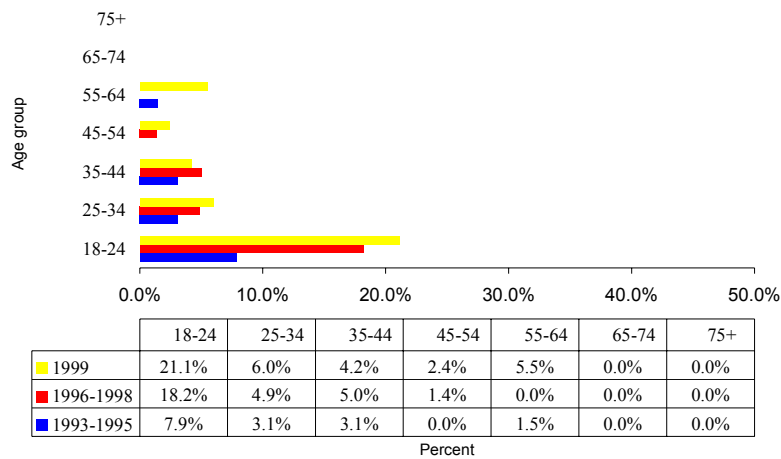
**Fig.71: Trend in Drinking and Driving by Gender**



The prevalence of drunk driving and advancing age groups demonstrated an inverse relationship; that is, the older the population the less they drive while intoxicated. While alcohol-impaired driving was most frequent among young adults aged 18-24 years (21.1%), it was completely absent (0%) among adults aged 65 and older.

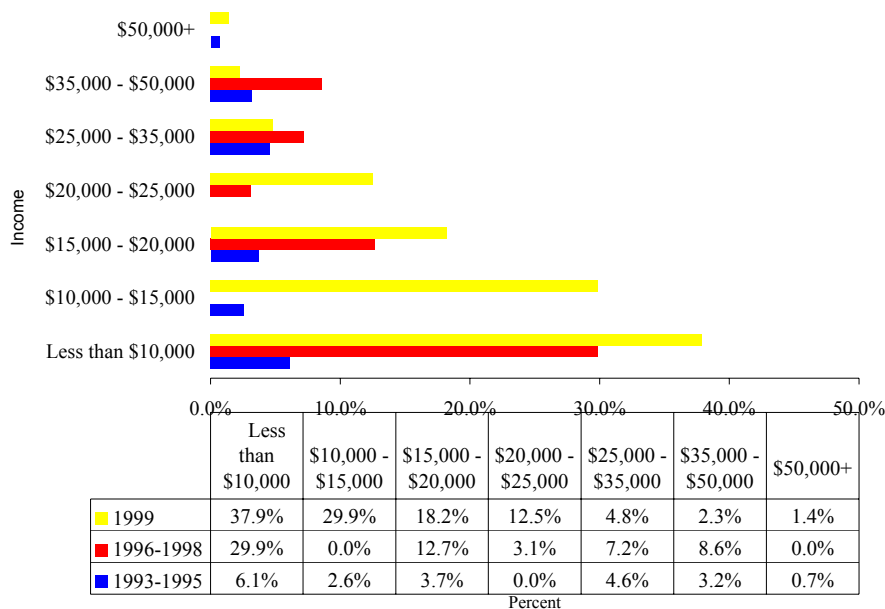
Age stratified rates other than those for persons 65 years old or more increased gradually between 1993 and 1999 (Fig.72).

**Fig.72: Trend in Drinking and Driving by Age**



The data support a conclusion that the less a person earns the more that person engages in drunk driving. For example, 37.9 percent of adults earning less than \$10,000 per year reported driving while intoxicated. This rate was 29.9 percent for income group of \$10,000-\$15,000; 18.2 percent for \$15,000-\$20,000; 12.5 percent for \$20,000-\$25,000; 4.8 percent for \$25,000-\$35,000; 2.3 percent for \$35,000-\$50,000; and only 1.4 percent for income over \$ 50,000. Since 1993-1995, the rate of driving while intoxicated increased alarmingly in the low-income groups (by 31.8 % in income less than \$10,000, Fig. 73).

**Fig 73: Trend in Drinking and Driving by Income**



Non-whites were twice as much likely to drive after too much alcohol consumption as (15%) whites (8.3%); even so, the overall rate of drunk driving increased in both groups since the 1993-1995 survey (Table 19). No trends were identified by respondent's education level.

<b>Table 19: Drinking and Driving</b>			
<b>Years</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>
<b>Highest Grade Completed</b>			
Some HS or Less	0%	0%	18%
HS Grade or GED	3.7%	0.7%	9.8%
Some College	4.7%	13.1%	11.2%
College Grade	1.7%	4%	4.1%
<b>Race</b>			
White	2.7%	6.6%	8.3%
Non-White	10%	0%	15%

### **Fruit and Vegetable Consumption**

Nutrition plays a vital role in achieving and maintaining optimum health. Dietary factors have a significant impact in decreasing the risk of heart disease, stroke, diabetes mellitus, obesity, and atherosclerosis. Fruits and vegetables are essential parts of a healthy diet. They are rich in complex carbohydrates, fiber, minerals, and vitamins. They are also low in fat and calories. The National Academy of Sciences, the U.S. Department of Agriculture, the U.S. Department of Health and Human Services, and the National Cancer Institute have determined that a minimum number of five servings of fruits and vegetables per day are needed to maintain good health. Accumulating scientific evidence indicates that a diet low in fat and high in fiber, which includes many fruits and vegetables, reduces the risk of getting certain types of cancer. Most fruits and vegetables contain anti-oxidants that are scientifically believed to reduce blood lipid levels and help prevent early aging process.

One of the objectives for Lancaster Healthy People 2010 is to improve the health, fitness, and quality of life of all County residents and reduce their chronic disease risk by promoting regular daily physical activity and optimal nutritional status. To achieve this goal, an educational approach has been proposed to increase per capita consumption of fruits and vegetables from the current national average of 2.5 servings per day to at least 5 servings per day. BRFSS respondents were asked six questions about their consumption of fruit juices, fruits, green salads, potatoes, carrots, and other vegetables to assess how often people in Lancaster County eat fruits and vegetables. Based on the responses to these six questions, an index of fruit and vegetable consumption per day was created by summing the frequency of consumption of the food items. Questions on fruits and vegetable were not asked in the 1999 survey.

#### **Consumption of five or more Fruit and Vegetable servings**

In 2000, three of every ten adults (30.7%, 95% CI, 28.3% - 33.1%) in Lancaster County ate the recommended five or more servings of fruits and vegetables each day. 18.4 percent reported consuming 3-5 times per day and almost half of the adults (48.4%) ate 1-4 times daily. Only 2.5 percent consumed less than once a day or never (Fig.74).

Table 20 shows the consumption of fruits and vegetables in the previous years. This table reveals a similar pattern of daily consumption.

**Fig.74: Daily Consumption of Fruits and Vegetable According to 2000 Survey**

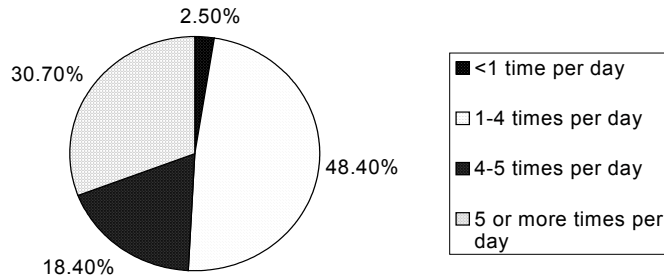
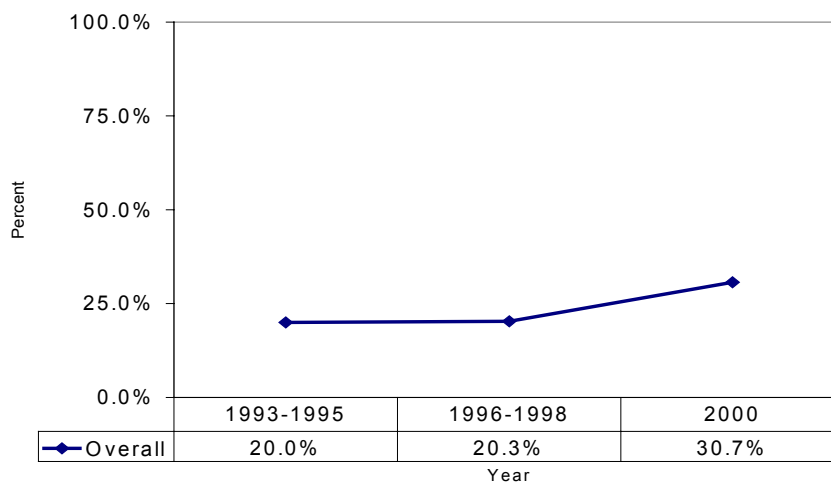


Table 20: Consumption of Fruits and Vegetables				
Year	93-95	95-98	1999	2000
Less than1 times per day	4.9%	4.1%	N/A	2.5%
1-4 times per day	56.4%	59.4%	N/A	48.4%
4-5 times per day	18.7%	16.3%	N/A	18.4%
5 or more times per day	20%	20.3%	N/A	30.7%

### Prevalence and Trend

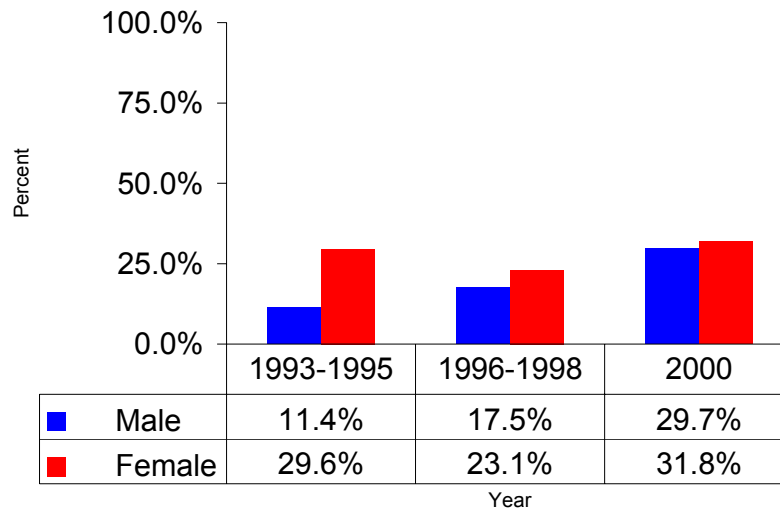
The proportion of respondents who reported consuming fruits and vegetables five or more times a day increased in 2000 (30.8 %) after remaining fairly stable (around 20 %) from 1993 to 1998 (Fig.75).

**Fig.75: Consumption of Fruits and Vegetables Five or More Times a Day**



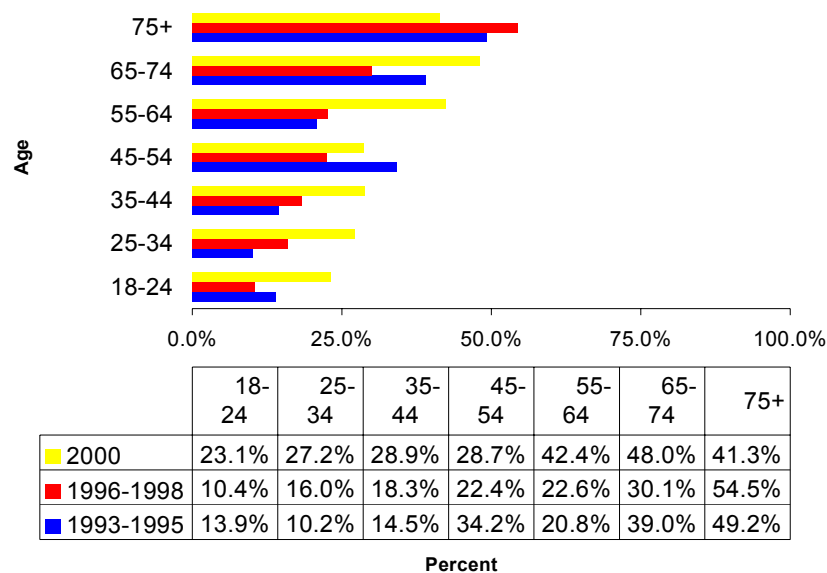
Lancaster County men (29.7%) and women (31.8%) showed little difference in eating fruits and vegetables five or more times a day (Fig.76).

**Fig.76: Consumption of Fruits and Vegetables by Gender**



Older adults (41.3%) were twice as likely as younger adults (23.1%) to comply (23.1) with the recommended five or more servings of fruits and vegetables per day by the “1995 Dietary guidelines for Americans.” Consumption of adequate (five or more serving) fruits and vegetables increased as the age increased (Fig.77).

**Fig 77: Trend in Consumption of Fruits and Vegetables Five or More Times a Day by Age Group**



Low-income respondents were two times more likely than respondents of higher income levels to consume appropriate amount of fruits and vegetables. In 2000, only 16.9 percent of the respondents with less than \$10,000 income reported eating these recommended foods as compared with 35.4 percent of the respondents with \$ 50,000 or more income. Similar trends were also observed in the 1993-1995 and 1996-1998 surveys (Fig.78).

Education level and racial origin of the respondents did not show any demonstrable trends in fruit and vegetable consumption (Table 21).

**Fig 78: Consumption of Five or More Fruits and Vegetable by Income Group**

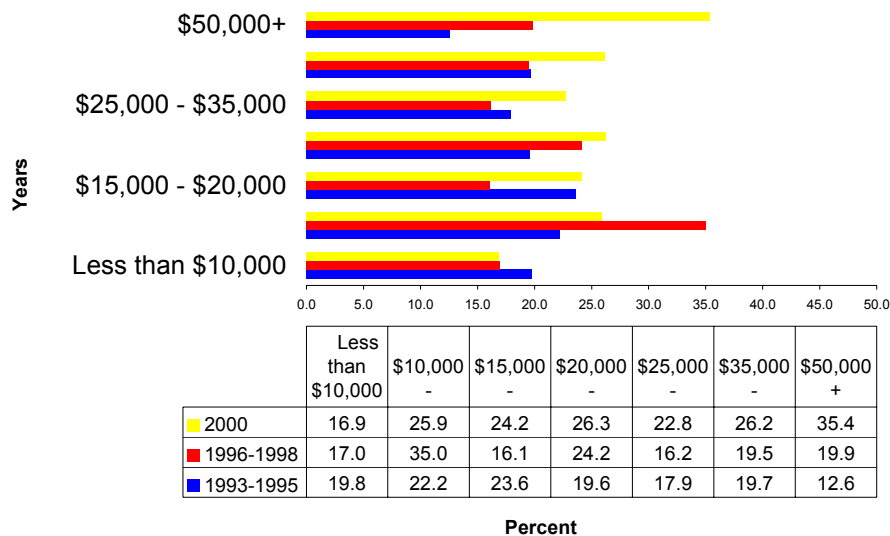


Table 21: Consumption of Fruits and Vegetables Five or More Times a Day			
Year	1993-1995	1996-1998	2000
<b>Education</b>			
Some HS or Less	14.6%	13%	20.2%
HS Grade or GED	19.6%	20.3%	34.4%
Some College	15.6%	19.9%	29.8%
College Grade	25.7%	21.4%	28.7%
<b>Race</b>			
White	20.2%	20.1%	30.6%
Non-White	15.5%	23.2%	31.7%

## Overweight

The World Health Organization now considers obesity to be a global epidemic and an increasingly important public health problem as more nations become “Westernized.” “Overweight” or “obese” is defined using the measure of body mass index (BMI), which is the ratio of weight in kilograms to height in meters, squared. “Overweight” in adults over 18 years old is defined as having a Body Mass Index (BMI) between 25.0 and 29.9. “Obesity” is defined as having a BMI of 30 or greater. Overweight and obesity develop when an individual consumes more energy than expected. Overweight and Obesity increases cardiovascular morbidity and mortality primarily through its effect on blood lipid levels, higher blood pressure, and higher blood sugar levels. These effects are also considered risk factors for osteoarthritis and breast, esophageal, gastric, endometrial, renal, and colorectal cancers.

The number of overweight adults (BMI between 25-29.9) in the United States has risen dramatically over the past few years. It is now estimated that 54% of American adults are overweight, an increase of 8% in 15 years. Very small reductions in weight (5%-10%) of an overweight or obese individual can have a large beneficial impact on health status and may reduce individual health care costs, which in turn will reduce the overall health care cost. In 1995, the portion of national health care cost attributable to obesity was \$99.2 billion. This represents approximately 10% of the total cost for national health care.

Height and weight reported by the BRFSS respondents were used to calculate the BMI.

### Current Overweight status

About two-fifths (39.5%, 95% CI, 36.9% - 42.1%) of all Lancaster County adults were overweight according to the self-reported 2000 BRFSS survey questions on height and weight.

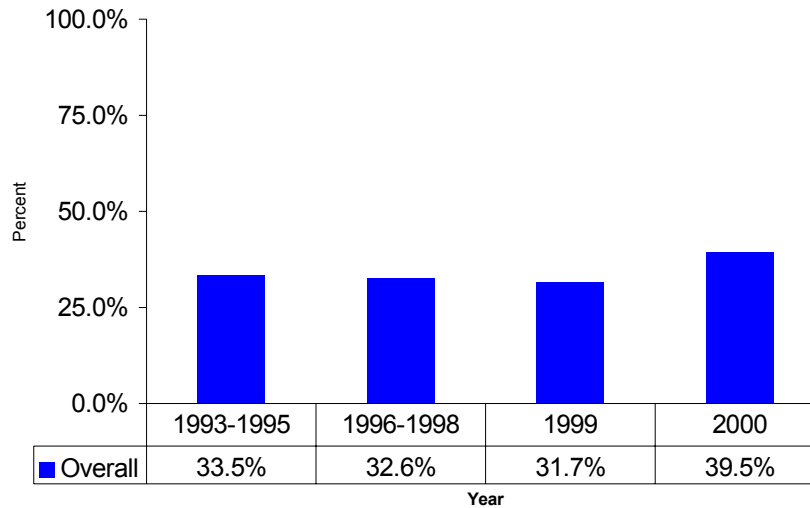
### Prevalence and Trend

The proportion of overweight adults in Lancaster County showed a very little variation between 1993 to 1999. It ranged from 33.5 percent in 1993-1995 to 32.6 percent in 1996-1998 and 31.7 percent in 1999 (Fig.79).

Just over half (50.8%) of the adult males in Lancaster County were overweight, whereas a little over one-fourth (27.4%) of female adults were overweight. Across all the years, men were about two times more likely to be overweight than women (Fig.80).

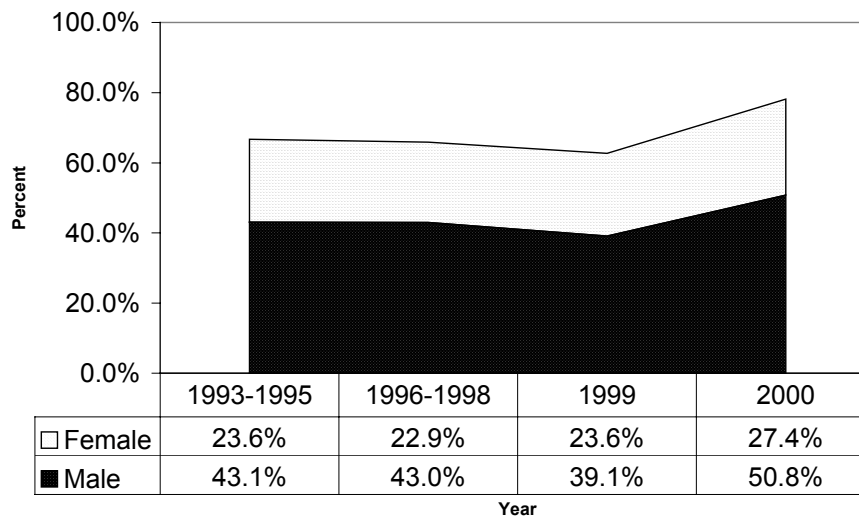
As the age of an adult increases, the chance that that person is overweight also increases. In 2000, the overweight rates ranged from a low of 31.6 percent for adults aged 18-24 to a high of 48.7 percent for adults aged 65-74. It then went down to 32.3 percent for adults aged 75 or older. Other than 1999, when the percent increased for those person aged 75 or more, the same pattern of age and overweight was noted in the previous years (Fig.81).

**Fig.79: Trend in Overweight Based on Body Mass Index**

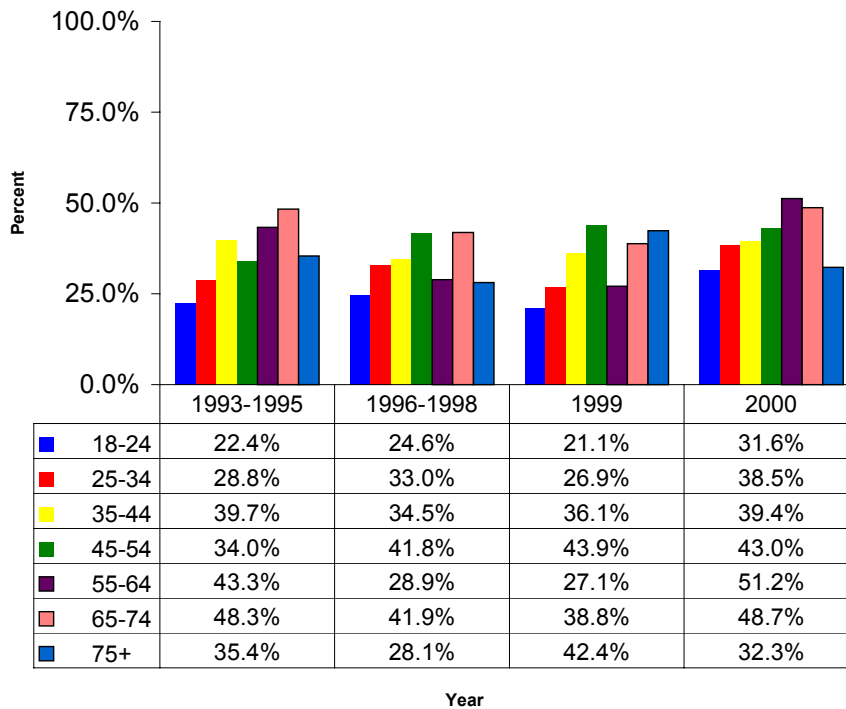


In 1999, 14.5 percent of adults with less than \$10,000 income were overweight compared to 39.9 percent of adults with \$50,000 income. This indicates a significant net difference of 25.4 percent, correlating to an increase in the overweight population in relation to an increase in income. This difference was 18.4 percent and 14.8 percent in 1993-1995 and 1996-1998, respectively.

**Fig.80: Overweight Male and Female Based on BMI**

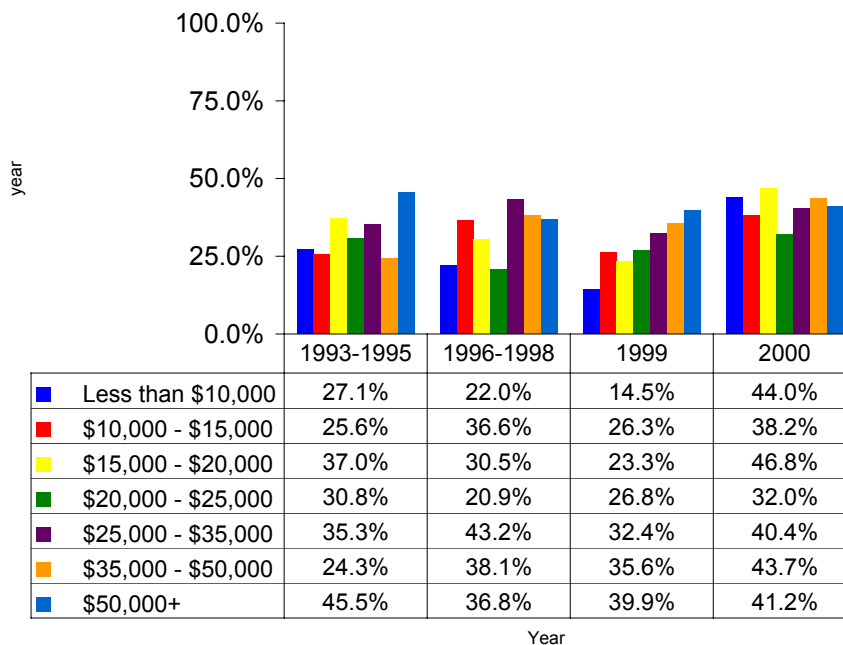


**Fig.81: Overweight by Age Group**



A higher prevalence of overweight was observed among whites (39.7%) over non-whites (32.3%, Fig.82b). College graduates had a higher prevalence of overweight than adults with “some high school education or less”. Nearly 40 Percent (39.9%) college graduates compared to 37.2 percent of adults with “some high school or less” were categorized as overweight according to the 2000 survey.

**Fig.82a: Overweight by Income**



Difference between these two groups were 23.3 percent versus 35.7 percent in 1993-1995, 28.1 percent versus 36.1 percent in 1996-1998, and 32.3 versus 39.3 percent in 1999 (Table 22).

**Fig.82b: Overweight by Race**

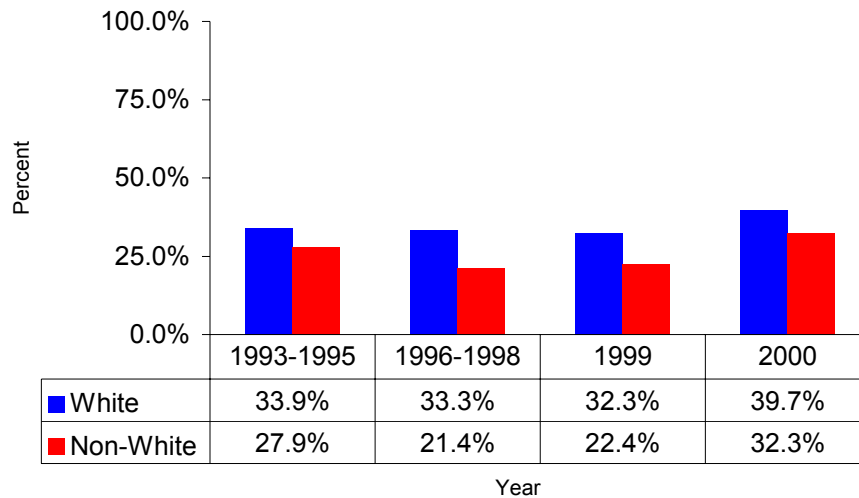


Table 22: Overweight Based on BMI				
Year	1993-1995	1996-1998	1999	2000
<b>Highest Grade Completed</b>				
Some HS or Less	23.3%	28.1%	32.3%	37.2%
HS Grade or GED	34.7%	34.8%	33.4%	40.6%
Some College	33%	28.4%	22.7%	38.2%
College Grade	35.7%	36.1%	39.3%	39.9%
<b>Race</b>				
White	33.9%	33.3%	32.3%	39.7%
Non-White	27.9%	21.4%	22.4%	32.3%

## **HIV/AIDS**

HIV (Human Immunodeficiency Virus) is the virus that leads to Acquired Immune Deficiency Syndrome (AIDS). It is also known as the “AIDS virus.” Acquired Immune Deficiency Syndrome (AIDS) includes a variety of immune system effects subsequent to infection with the Human Immunodeficiency Virus (HIV). At the point of a diagnosis of AIDS, the immune system is already severely impaired. Death is the usual outcome of infection with HIV. The Centers for Disease Control and Prevention (CDC) estimates that 800,000 to 900,000 U.S. residents are living with HIV infection.

Approximately 40,000 new HIV infections occur each year in the United States; half are in people younger than 25 years of age. As of December 31, 2000, there were 448,060 deaths among people with AIDS that had been reported to the CDC.

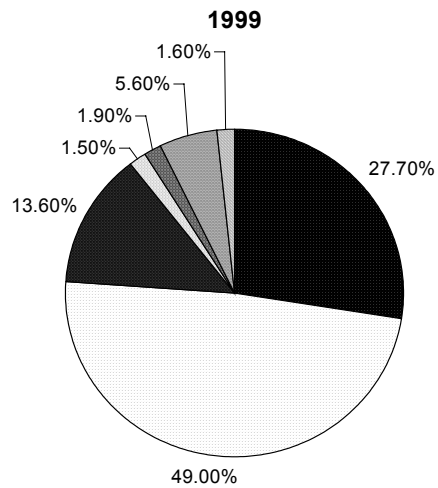
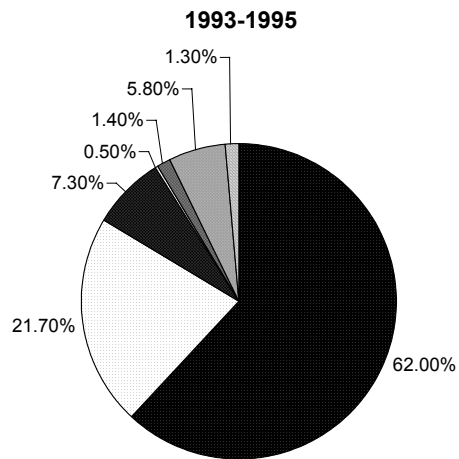
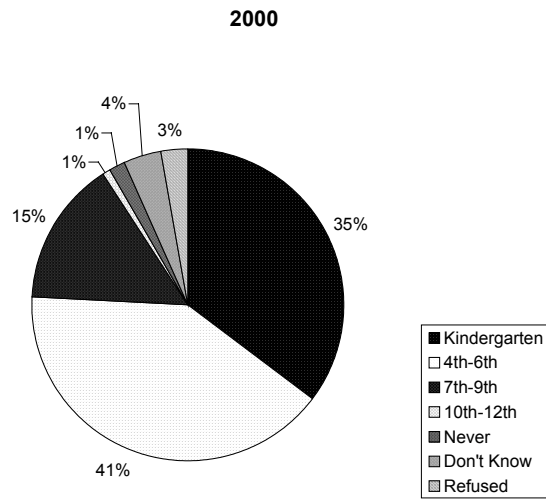
According to HHSS (Health and Human Service Surveillance) data, Nebraska’s AIDS toll continues to grow, with 1,068 Nebraskans being diagnosed and reported with AIDS. More than half of these people have died.

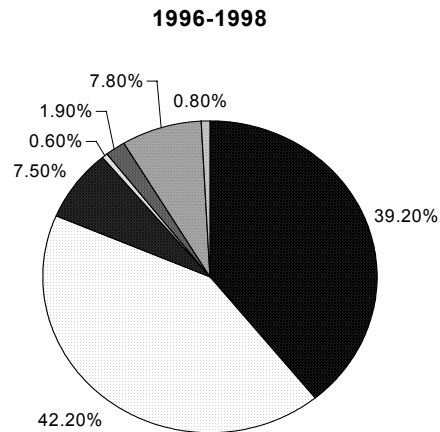
The BRFSS AIDS-related questions were not asked of respondents aged 65 and older. Respondents age 18 to age 64 were asked if they thought their chance of getting the AIDS virus was “high, medium, low, or none” (Table 7-1). Respondents were also asked if they had ever had their blood tested for HIV. Questions were asked to determine the grade at which children should be exposed to AIDS education and whether condom use should be encouraged in sexually active teenagers to reduce AIDS exposure.

### **AIDS Education**

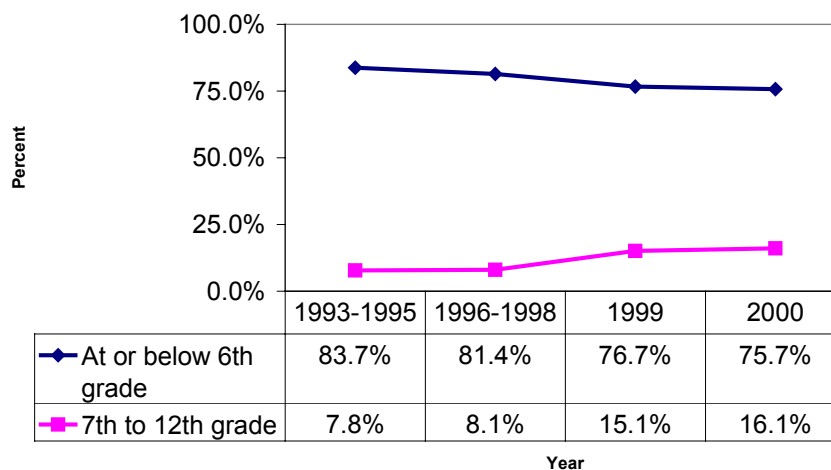
When asked in which grade HIV/AIDS education should begin for a child in school, 75.7 percent (95% CI, 73.1% - 78.3%) of the respondents in 2000 felt it should begin at or below the 6<sup>th</sup> grade level and 35 percent (95% CI, 32.1% - 37.9%) believed it should start in kindergarten. Only 1.9 percent (95% CI, 1.08% - 2.72%) believed that it should never occur, and 3.9 percent (95% CI, 2.8% - 5%) expressed that they are uncertain about the issue. The proportion of respondents who affirmed to start HIV/AIDS education at or below 6<sup>th</sup> grade was 83.7 percent in 1993-1995, 81.4 percent in 1996-1998, and 76.7 percent in 1999. The data indicates a gradual decline in the opinion for that particular grade level. This decline, however, could be attributed to the simultaneous increase in the proportion of respondents who thought that it should begin at the 7<sup>th</sup> to 12<sup>th</sup> grade levels (Fig.83a).

**Fig.83 a: AIDS Education**





**Fig.83b: AIDS Education (Changes in Opinion)**



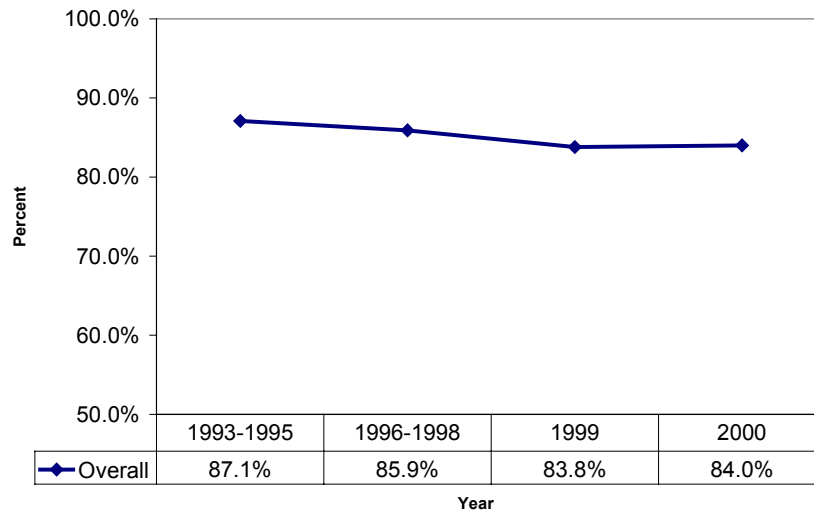
### **Encourage condom use**

About 84 percent (95% CI, 81.8% - 84.02%) of Lancaster County adults between the ages of 18 - 64 years reported that, if they had any sexually active teenage children, they would encourage them to use a condom. The proportion of adults who expressed this attitude remained about the same for last seven years with small fluctuations (Fig.84).

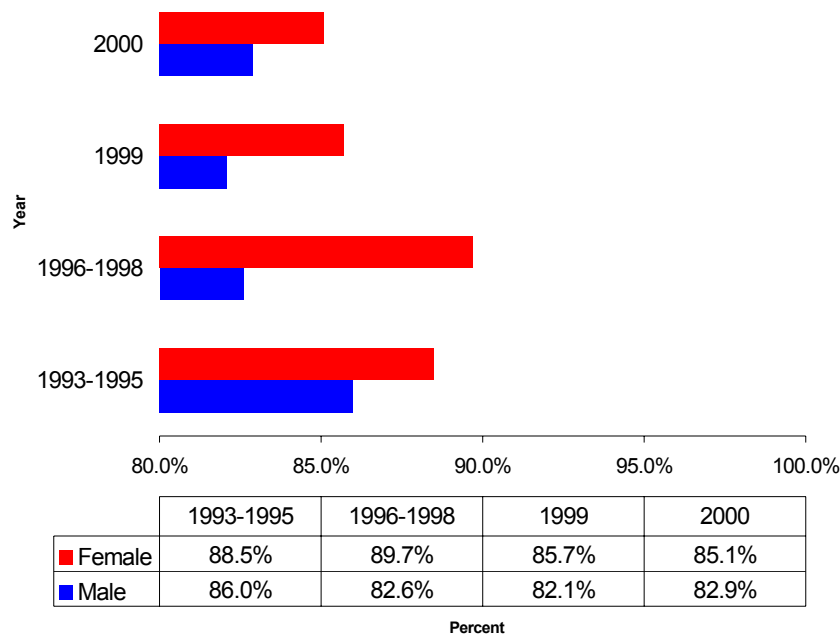
More women (85.1%) than men (82.9%) were in favor of encouraging condom use by their sexually active teenager. This response trend is also seen since the 1993-1995 period (Fig.85).

A greater number of the younger generation (89.2% of adults aged 18-24) than respondents of older generations (78% of adults aged 55-64) favored teen condom use.

**Fig.84: Would Encourage Condom Use**

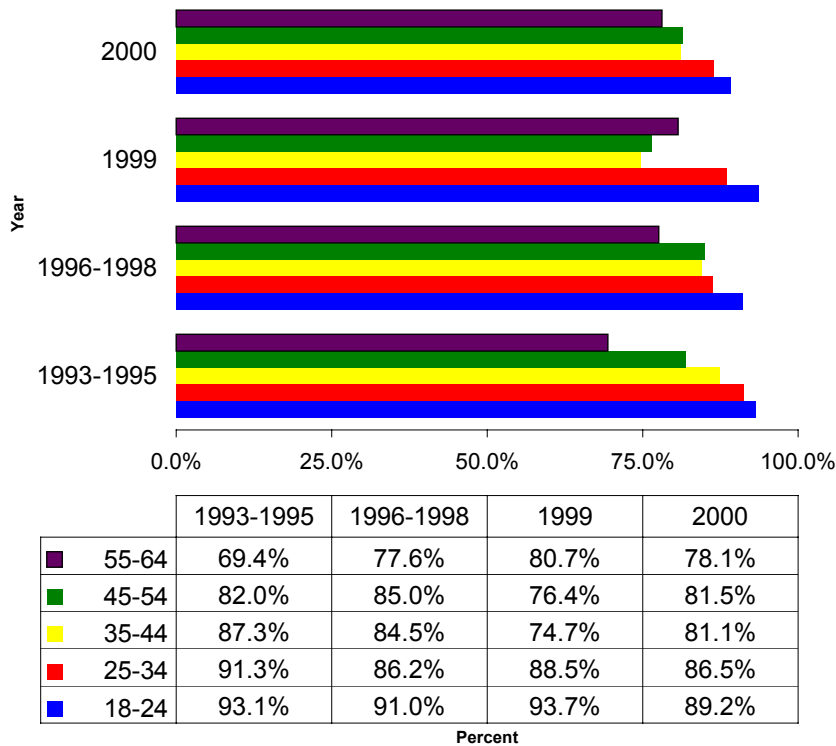


**Fig.85: Would Encourage Condom Use by Gender**



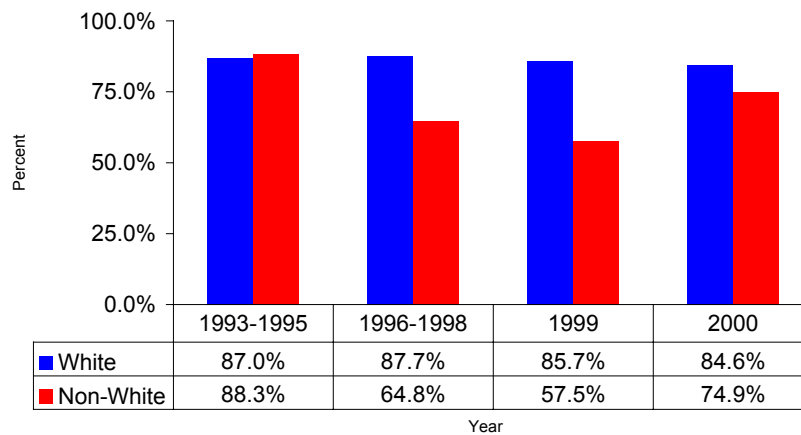
The proportion of adults aged, 18-24 years that support the teen use of condoms concept were 93.1 percent in 1993-1995, 87.7 percent in 1996-1995, and 93.7 percent in 1999. Support of teen condom use by adults age 55 to 64 years, was 69.4 percent in 1993-1995, 77.6 percent in 1996-1998, and 80.7 percent in 1999 (Fig.86).

**Fig.86: Would Encourage Condom Use by Age Group**



Although more than one-third of the respondents among whites and non-whites stated that they would encourage their sexually active teenager to use a condom, whites (84.6%) were more in favor of such encouragement than non-whites (74.9%, Fig.87). No differences were seen across income or educational groups (Table 23).

**Fig.87: Would Encourage Condom Use by Race**

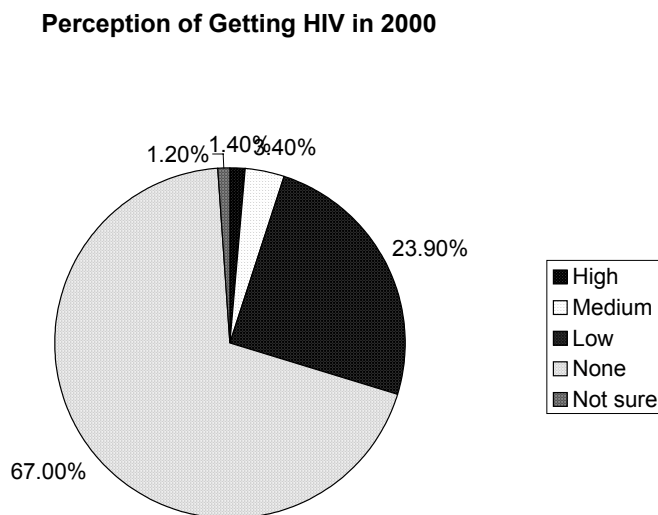


<b>Table 23: Would Encourage Condom Use</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Highest Grade Completed</b>				
Some HS or Less	88.6%	84%	81.8%	78.8%
HS Grade or GED	89.4%	90%	86.4%	86.3%
Some College	89.3%	85.3%	87.3%	83.6%
College Grade	83%	84%	78%	83.7%
<b>Annual Household Income</b>				
Less than \$10,000	93.8%	95.3%	82.7%	83.8%
\$10,000 - \$15,000	89%	83.9%	93.8%	90.6%
\$15,000 - \$20,000	86%	90%	98.3%	80.8%
\$20,000 - \$25,000	96.5%	72.9%	83.2%	86%
\$25,000 - \$35,000	90.3%	87.8%	86.3%	84.7%
\$35,000 - \$50,000	83%	90%	80%	88.2%
\$50,000+	86%	87.9%	83.6%	85%

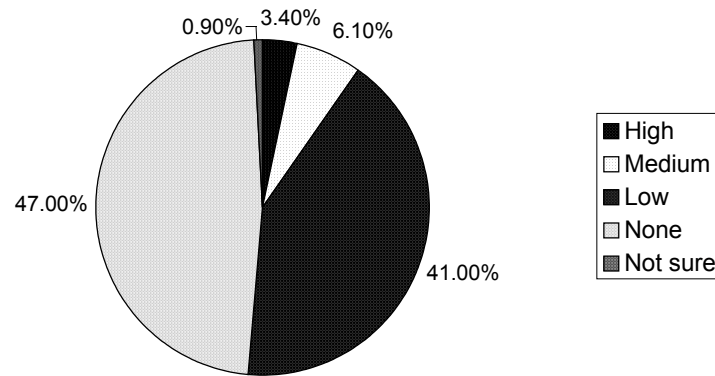
### HIV Risk Perception

A person's perceived chance of contracting HIV (the AIDS virus) might be related to knowledge of transmission routes or understanding of the risk of exposure as it relates to behavior. Only 1.4 percent (95% CI, 0.70% - 2.1%) of respondents in the 2000 BRFSS survey felt that they were at high risk when asked about their perceived chances of getting infected with HIV. The majority of respondents (67%, 95% CI, 64.2% - 69.8%) felt they were not at risk of contracting HIV, and another 23.9 percent (95% CI, 21.3% - 26.5%) felt their chances were low (Fig.88a).

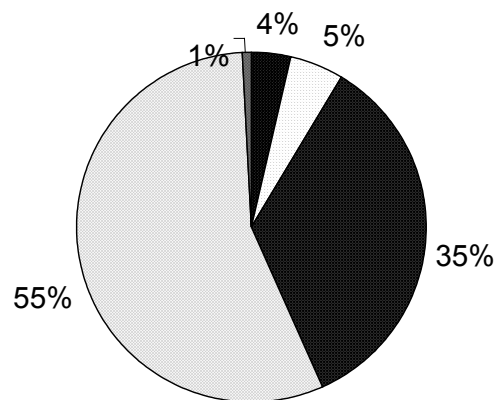
**Fig 88a: Perception of Getting HIV**



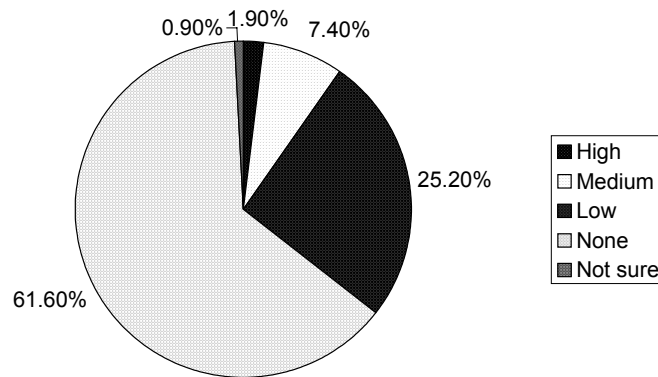
### Perception of Getting HIV in 1993-1995



### Perception of Getting HIV in 1996-1998



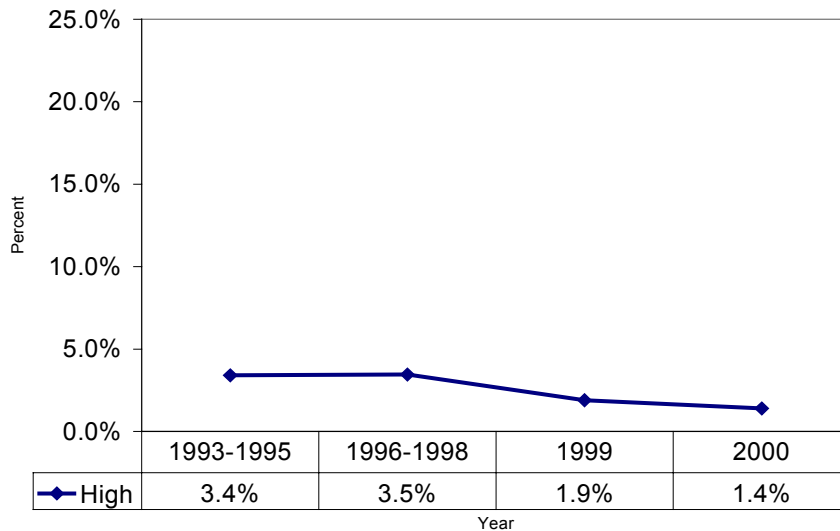
### Perception of Getting HIV in 1999



### Prevalence and Trend

Figure 88b shows the trend in the respondents reporting a “High” risk of contracting HIV. Fewer adults aged 18-64 (1.4%) perceive themselves at risk today than seven years ago (3.4% in 1993-1995, Fig 88b).

**Fig.88b: Trend in High Perception of Getting HIV**

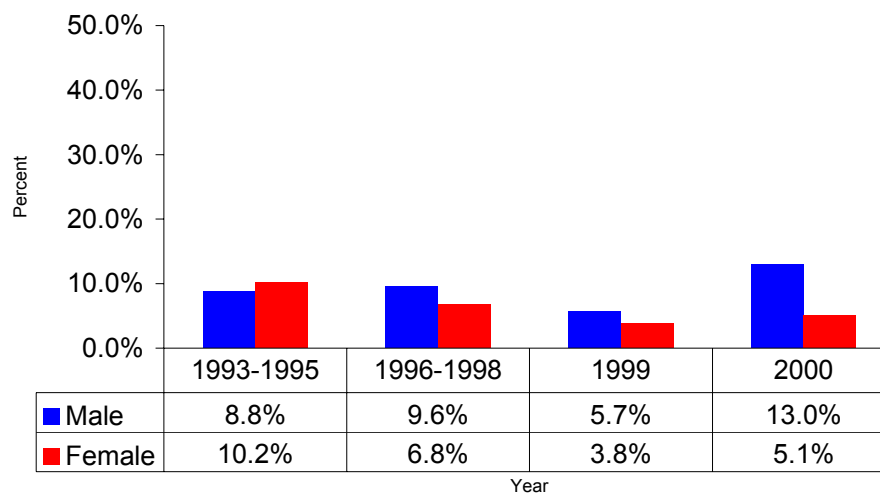


More younger than older adults considered themselves to be at high and medium risk when these risk categories were added together. Approximately ten percent of respondents aged 18-24 years reported their high or medium chance of getting HIV, compared to 1.7 percent of adults aged 55-64, a difference of about 8 percent. The difference in reported high and medium risk perception was even greater in the previous survey years (Table 24).

<b>Table 24: Perception of High or Medium Chances of Getting HIV</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Age group</b>				
18-24	10.6%	14.7%	17.6%	9.6%
25-34	14.9%	7.3%	7.5%	3.6%
35-44	6.1%	3.7%	6.4%	4.2%
45-54	7.5%	9.3%	6.4%	2.8%
55-64	2.6%	5%	4.3%	1.7%

Males reported themselves to have a higher risk of contracting HIV than females. About 13 percent of male respondents said they were at high or medium risk of getting HIV compared to 5.1 percent of females (Fig.89).

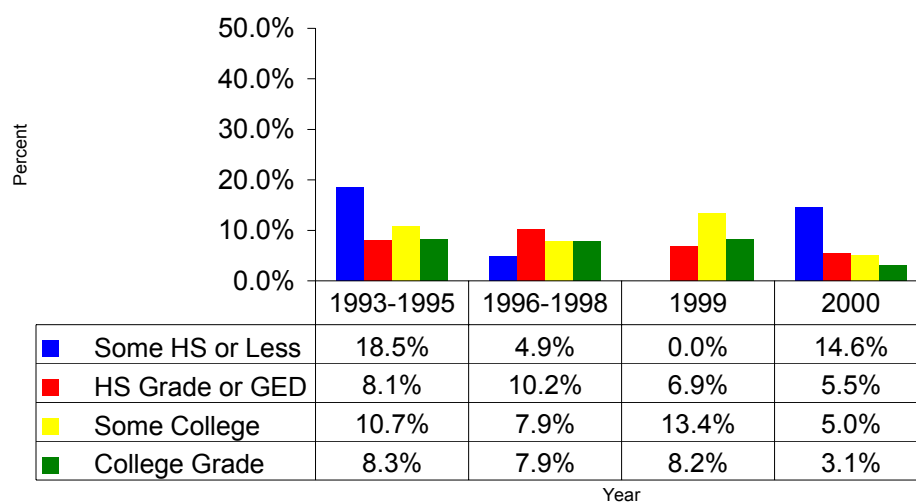
**Fig.89: Trend in High or Medium Chances of Getting HIV by Gender**



As education level increased, HIV risk perception decreased. Those with “some high school or less education” had a higher proportion (14.6%) of respondents reporting high or medium HIV risk compared to those with a college diploma (3.1%). The relationship between a respondent’s education level and risk perception followed a similar pattern in the previous surveys, except in the 1999 period (Fig.90).

When HIV risk perception was considered in relation to race, whites showed higher odds of reporting HIV risk than non-whites in last two surveys (5% vs. 2.4% in 2000 and 17.6 % vs. 7.5% in 1999). However, the odds for the same two groups were lower in the 1993-1995 and 1996-1998 periods (Table 19). Considerable differences in perceived high or medium HIV risk between two extreme income groups (income less than \$10,000 and \$50,000) were observed in all but surveys conducted in 2000, where almost no difference between these two income groups was noted (Table 25).

**Fig.90: High or Medium HIV Risk Perception by Education**



**Table 25: Perception of High or Medium Chances of Getting HIV (Income and Race)**

Year	1993-1995	1996-1998	1999	2000
<b>Annual Household Income</b>				
Less than \$10,000	13.1%	13.1%	18.3%	8.3%
\$10,000 - \$15,000	10.7%	26.6%	2.1%	0%
\$15,000 - \$20,000	6%	8.3%	13.2%	5.7%
\$20,000 - \$25,000	20.4%	6.8%	15.7%	13.3%
\$25,000 - \$35,000	6.6%	7.5%	11.6%	1%
\$35,000 - \$50,000	60%	6.9%	15.8%	1.8%
\$50,000+	6.5%	3.8%	8.9%	7.1%
<b>Race</b>				
White	8.9%	8%	17.6%	5%
Non-White	19.9%	14.4%	7.5%	2.4%

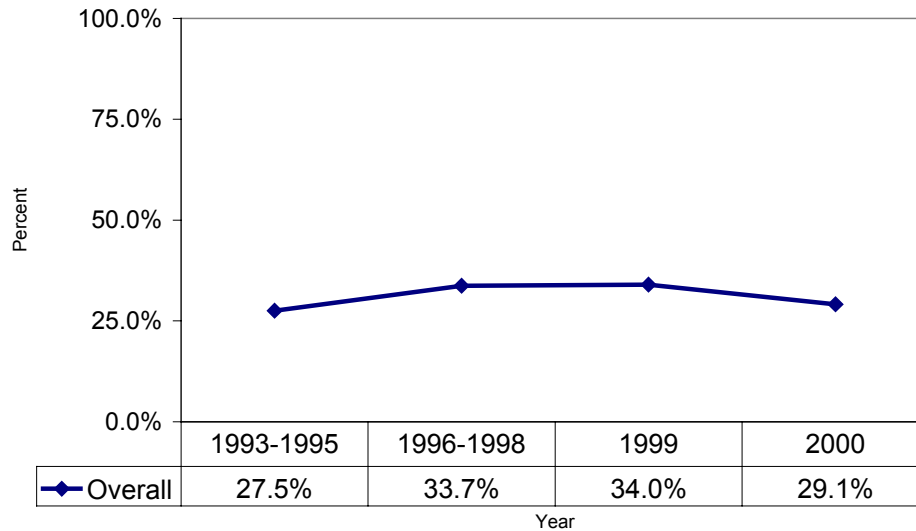
### HIV Testing

Respondents were asked, aside from blood donations, if they had ever been tested for HIV. In 2000, approximately 29 percent (95% CI, 26.4% - 31.8%) of adults aged 18-64 in Lancaster County reported that they had been tested for HIV.

## HIV Testing Trends

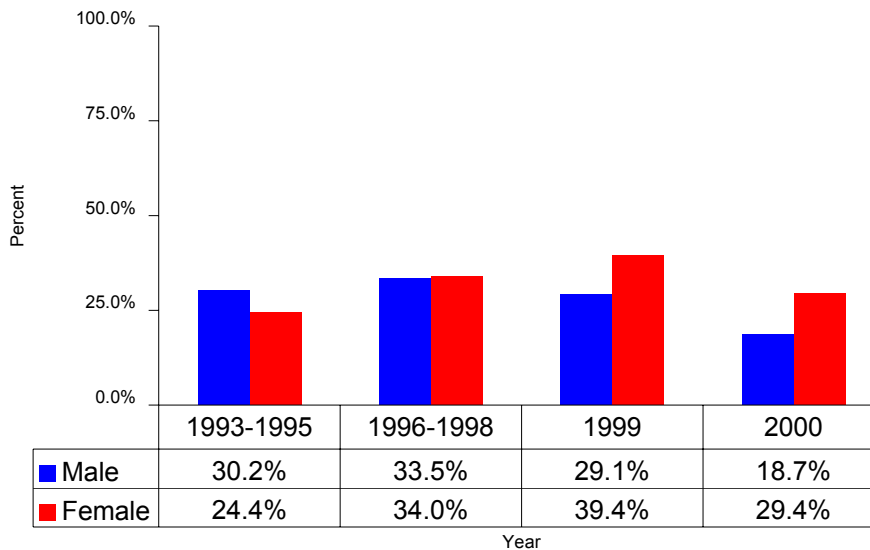
Overall HIV testing rates showed an inconsistent trend over the periods covered in this report (Fig.91).

**Fig.91: Trend in Ever Had HIV Test**



More women (29.4%) than men (18.7%) had higher rate for “ever having HIV test,” this difference was not true, however, in 1993-1995 period, when a higher proportion of men than women had the test. No difference was observed between these two groups in the 1996-1998 period (Fig.92a).

**Fig.92a: Trend in Ever Had HIV Test by Gender**



Adults aged 25-34 had the highest proportion of respondents receiving an HIV test (34%) followed by those aged 45-54 years (31.1%) and those aged-35–44 years (29.7%). The proportion of adults that had been tested for HIV was considerably lower among respondents aged 55–64 years, irrespective of survey years (Fig.92b). No trends were evident by income, race, or education level (Table 26).

**Fig 92b: Trend in Ever Had HIV Test by Age**

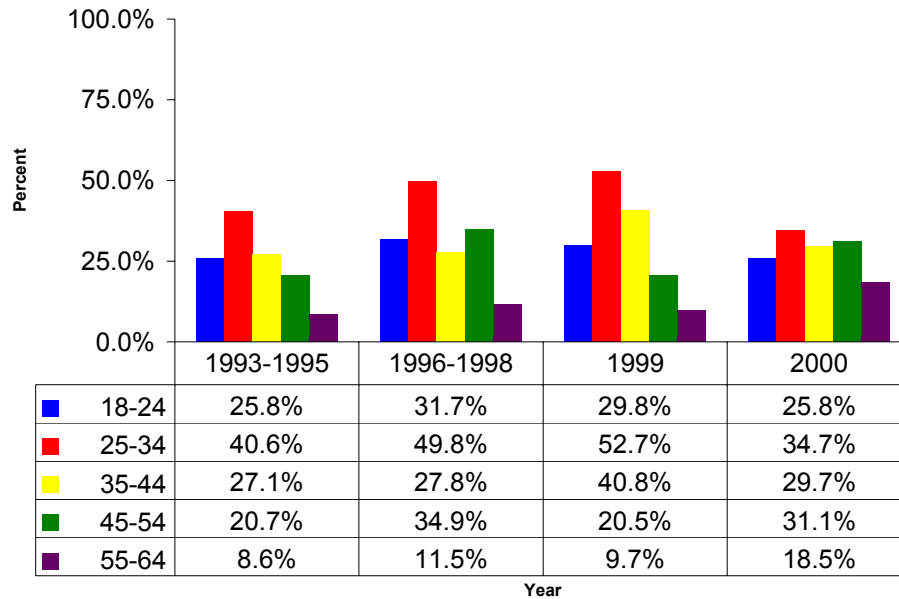


Table 26: Ever Had HIV Test				
Year	1993-1995	1996-1998	1999	2000
Some HS or Less	16.6%	17%	38.4%	38.2%
HS Grad or GED	28.3%	28.8%	28.6%	19.3%
Some College	25.8%	34.3%	35.9%	31.7%
College Grad	30%	38.8%	35.3%	36.5%
<b>Annual Household Income</b>				
Less than \$10,000	19.2%	40.1%	28.3%	33.1%
\$10,000 - \$15,000	35.9%	31.9%	56.8%	36.1%
\$15,000 - \$20,000	25.3%	37.8%	31.8%	30.5%
\$20,000 - \$25,000	40.2%	29.2%	27.8%	40.6%
\$25,000 - \$35,000	26.9%	35.6%	42%	33.2%
\$35,000 - \$50,000	24.2%	38.3%	27.5%	31.5%
\$50,000+	28.2%	36.6%	36%	28.9%
<b>Race</b>				
White	27.3%	34%	33%	28%
Non-White	34.2%	32.9%	44.9%	41.9%

Table 27a and 27b depict the survey participants' main reasons and test locations for their most recent HIV blood tests. The most frequently cited category in the 2000 period was respondents' own curiosity (23.8%) followed by a routine check-up (13.6%). The proportion of respondents who went for a HIV test due to their own curiosity was 11.8 percent in 1993-1995, 14.59 percent in 1996-1998, and 16.8 percent in 1999.

The most commonly reported site for HIV testing was at private doctor or HMO with 43.6 percent of responses in 2000. In the 2000 period, the next most common responses included those that received their HIV test at the hospital, the emergency room, and at an outpatient clinic (13.9%). However, for the periods of 1993-1995 and 1999 the most common testing sites were the blood bank, plasma center, and Red Cross.

<b>Table 27 a: Main Reason for Most Recent HIV Blood Test</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Hospitalization/Surgical Procedure</b>	1.9%	2%	3.1%	6.4%
<b>To apply for Health Insurance</b>	4.2%	2.7%	4.2%	3.4%
<b>To apply for Life Insurance</b>	5.4%	8.5%	11.6%	6.6%
<b>For Employment</b>	3.9%	7.4%	2.1%	3%
<b>To apply for a Marriage license</b>	1.1%	1.1%	0.7%	0.6%
<b>For Military service</b>	4.9%	6%	8.8%	6.8%
<b>For Immigration</b>	0%	0.8%	0%	2.9%
<b>Just to find out You are Infected</b>	11.8%	14.6%	16.8%	23.8%
<b>Because of referral by a Doctor</b>	0	0	0	0
<b>Because of pregnancy</b>	N/A*	7.8%	23.5%	9.9%
<b>Referred by your sex partner</b>	0	0.5%	0%	0.6%
<b>Part of a blood donation process</b>	16.6%	17.1%	3.3%	2.2%
<b>Routine check-up</b>	5.3%	14.1%	12.5%	13.6%
<b>Occupational exposure</b>	5.7%	5.4%	0.4%	4.9%
<b>Because of illness</b>	2.7%	1.8%	0.9%	1.8%
<b>At risk of HIV</b>	N/A	0%	3.8%	5.6%
<b>Other</b>	5.6%	6.3%	5.6%	6.9%
<b>Don't know</b>	1.9%	1.9%	2.3%	1.1%
<b>Refused</b>	0%	1.8%	0.5%	0%

\* Was not asked

<b>Table 27b: Site of Most Recent HIV Blood Test</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>199</b>	<b>2000</b>
<b>Private Doctor, HMO</b>	16.5%	34.1%	43.3%	43.6%
<b>Blood bank, plasma center, red cross</b>	17.6%	0.7%	11.4%	0.6%
<b>Health Department</b>	10.2%	6.1%	2%	4.3%
<b>AIDS clinic, counseling, testing site</b>	2.1%	4.6 %	5.2%	1.3%
<b>Hospital, emergency room, outpatient clinic</b>	10.5%	16.8%	3.3%	13.9%
<b>Family planning clinic</b>	6.9%	1.1%	1.3%	0.6%
<b>Prenatal clinic, obstetrician's office</b>	1.5%	0%	0%	2.4%
<b>TB clinic</b>	3.5%	0%	0%	0%
<b>STD clinic</b>	0.3%	0%	3.2%	0%
<b>Community health clinic</b>	0.7%	2.1%	1.2%	1.2%
<b>Clinic run by employer</b>	2.7%	6.4%	2.1%	6.8%
<b>Insurance company clinic</b>	4.6%	3.2%	0.8%	1.8%
<b>Other Public clinic</b>	3.5%	3.7%	1%	5.4%
<b>Drug treatment facility</b>	1.1%	0%	7.7%	0.6%
<b>Military service</b>	4.1%	6.6%	0%	5.3%
<b>Immigration site</b>	3.6%	0%	3.6%	0.5%
<b>At home, Home visit by Nurse or Health worker</b>	N/A*	6.2%	6.6%	4.8%
<b>At home using self sampling kit</b>	N/A	0.8%	0%	1.4%
<b>In jail or prison</b>	N/A	0.3%	0%	0%
<b>Other Public clinic</b>	N/A	0%	4.6%	4.9%
<b>Don't know</b>	3.8%	1%	1.4%	1.1%
<b>Refused</b>	0%	1.1%	1.4%	0%

\* Was not asked

### **Adult Immunization**

In 1995, pneumonia and influenza together ranked sixth among the 10 leading causes of death in the United States. Influenza is characterized by the sudden onset of fever, muscle pain, sore throat, and nonproductive cough. Pneumonia is an acute inflammation of the lung tissue characterized by shortness of breath, rapid heartbeat, rapid breathing, productive cough, fever, and chest pain. It is estimated that more than 20,000 Americans die each year from influenza-related illness and 40,000 die from pneumococcal infection. Pneumococcal pneumonia accounts for 25%-35% of all pneumonias leading to hospitalization resulting in 7,000 to 13,000 deaths per year in the United States. An estimated 90% of deaths caused by these illnesses occur among adults aged 65 years or more.

Influenza vaccine can prevent illness in approximately 70-90% of healthy people aged less than 65 years. Among elderly people living outside of nursing homes or similar chronic-care facilities, influenza vaccine is 30-70% effective in preventing hospitalization for pneumonia and influenza. Among elderly persons residing in nursing homes, the vaccine can be 50-60% effective in preventing hospitalization or pneumonia and 80% effective in preventing death. However immunity to one strain of the influenza virus does not confer immunity to all other strains. Consequently, the strains included in the vaccination vary from year to year depending on those strains expected to be in circulation.

To determine the prevalence of vaccination coverage, BRFSS respondents were asked if they had an influenza vaccination in the past 12 months. They were also asked if they have ever had a pneumonia vaccination.

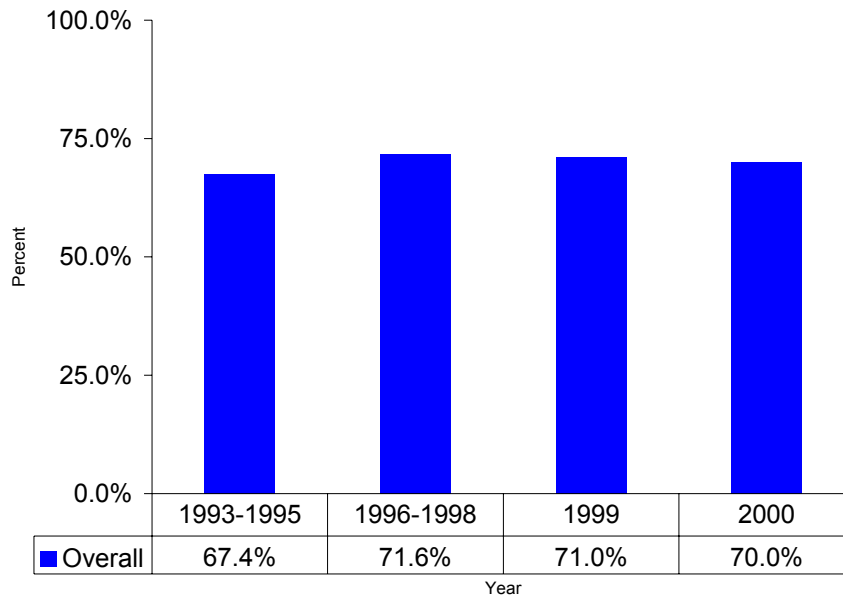
#### **Had a Flu shot in past 12 month**

Over two-thirds (70%, 95% CI, 65% - 75%) of adults, aged 65 and older, reported receiving influenza vaccination in the 2000 BRFSS survey.

#### **Prevalence and Trend**

Prevalence of flu shot coverage did not vary significantly by survey years. The proportion of respondents who reported receiving a flu shot within the past 12 months prior to the survey was 67.4 percent in 1993-1995, 71.6 percent in 1996-1998, and 71 percent in 1999 (Fig.93).

**Fig.93: Had Flu Shot in Past 12 Months**



No particular trends were observed in the percentage of people receiving the influenza vaccination coverage when demographic variables were taken into account.

In 2000, male respondents (72.7%), respondents with college diplomas (81.7%), respondents of age over 75 (77.4%), and adults with an income more than \$50,000 (69.4%) showed a little higher flu shot rates than female respondents (67.2%), respondents “with some or less” high school education (68.8%), adults of aged 65-74 (61.8%) and income less than \$10,000 (78.1%, Table 28).

<b>Table 28: Had Flu Shot Over 65 +</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Highest Grade Completed</b>				
Some HS or Less	80%	62.2%	74%	68.8%
HS Grade or GED	69.1%	65.4%	60%	62.9%
Some College	52.5%	100%	76%	76.2%
College Grade	64.9%	75.5%	83%	81.7%
<b>Sex</b>				
Male	65.5%	74.5%	68%	72.7%
Female	68.9%	69.4%	73%	67.2%
<b>Annual Household Income</b>				
Less than \$10,000	49.4%	50.9%	74.7%	78.1%
\$10,000 - \$15,000	55.9%	71.9%	65.9%	35%
\$15,000 - \$20,000	72.8%	66.5%	66%	63.4%
\$20,000 - \$25,000	85.7%	78.4%	88.3%	74.4%
\$25,000 - \$35,000	40.8%	87.7%	80%	80.8%
\$35,000 - \$50,000	84.2%	100%	96.1%	71.3%
\$50,000+	73.5%	55.4%	74%	69.4%
<b>Race</b>				
White	67.4%	70.4%	71%	69.1%
Non-White	67.4%	100%	100%	75.8%
<b>Age Group</b>				
65-74	68.9%	77.6%	66.8%	61.8%
75+	65.8%	65.9%	74.9%	77.4%

### **Ever had Pneumonia Vaccination**

About 58 percent (95% CI, 52.56% - 63.43%) of adults aged 65 and older in Lancaster County have had a pneumonia vaccination.

### **Prevalence and Trend**

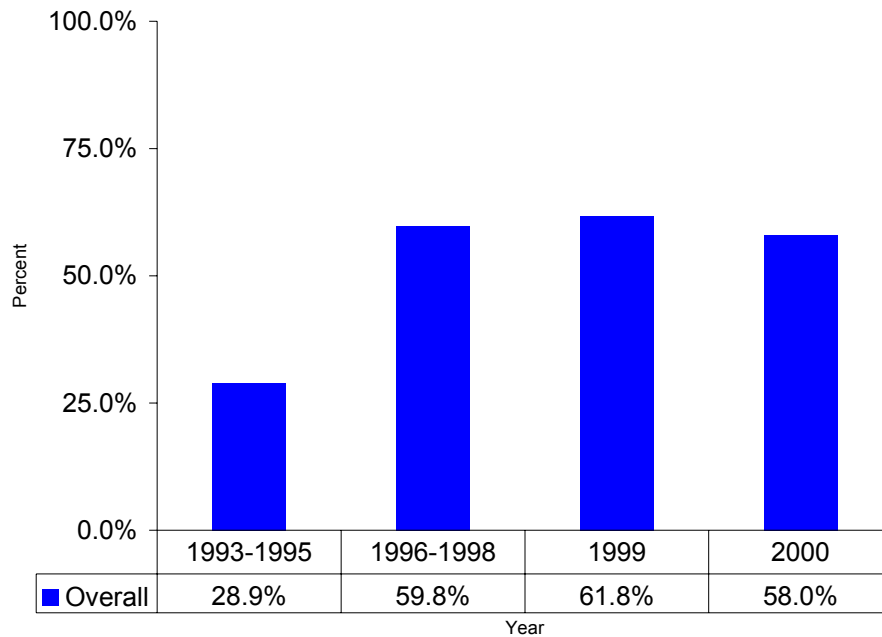
The proportion of adults who reported that they have received pneumonia vaccination almost doubled from the 1993-1995 to 1996-1998 periods; thereafter, the trend remained fairly stable (Fig.94).

Although men were more likely to report that they have received a pneumonia vaccination than women, the rates have increased substantially in both sexes since the 1993-1995 period (Fig.95). Vaccination rates for both sexes have doubled from 1993-1995 to 2000 (from 30% for men and 27.9% for women to 63.7% for men and 53.8% for women).

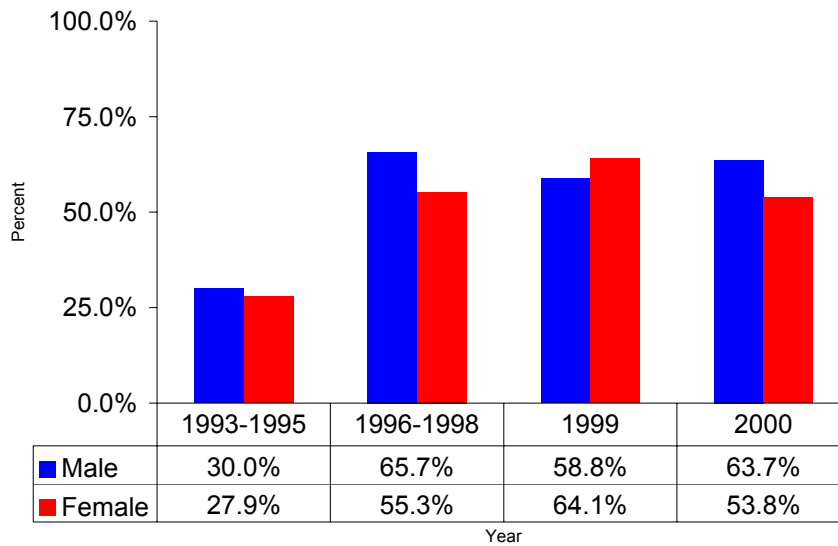
According to data from the 1999 and 2000 surveys, more adults of the age group 75 and greater had received pneumonia vaccination than adults aged 65-74 years. However, survey data for 1993-1995 (31% vs. 26.7%) and 1996-1998 (62.2% vs. 57.5%) reflected

the opposite trend (Fig.96). No trends were identified by other demographic variables (Table 29).

**Fig.94: Ever Had Pneumonia Vaccination**



**Fig.95: Ever Had Pneumonia Vaccination by Gender**



**Fig 96: Ever Had Pneumonia Vaccination by Age Group**

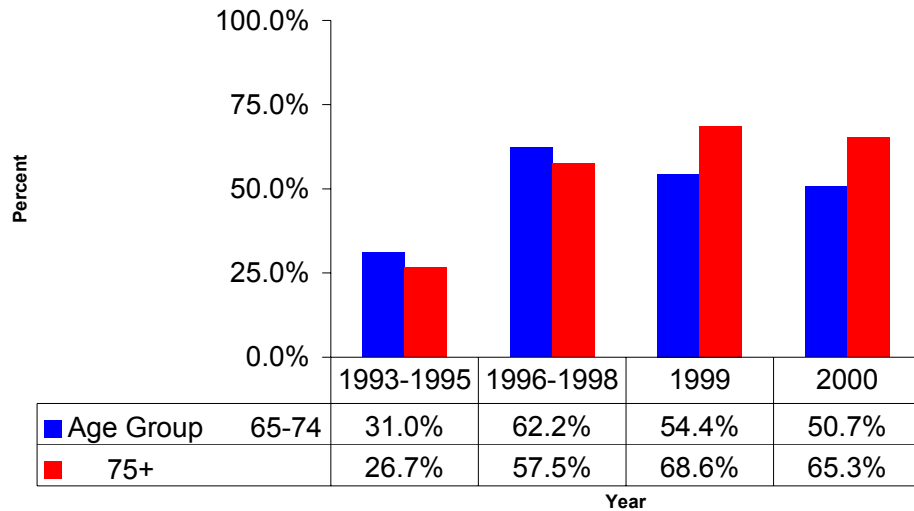


Table 29: Ever Had Pneumonia Vaccination				
Year	1993-1995	1996-1998	1999	2000
<b>Highest Grade Completed</b>				
Some HS or Less	28.1%	44%	76.5%	54.1%
HS Grad or GED	42.1%	53.8%	56%	53.7%
Some College	11.6%	88.5%	60.4%	61.1%
College Grad	26.1%	67.4%	68.4%	68%
<b>Annual Household Income</b>				
Less than \$10,000	12.8%	50.9%	74.7%	37.8%
\$10,000 - \$15,000	26.5%	61.8%	44.2%	54.3%
\$15,000 - \$20,000	31.9%	56.2%	62.5%	59.8%
\$20,000 - \$25,000	85.7%	68.8%	69.3%	66.6%
\$25,000 - \$35,000	20.4%	70.4%	61.6%	66.7%
\$35,000 - \$50,000	18.4%	100%	84.6%	56%
\$50,000+	27.7%	37.3%	70%	56.7 %

## **Colorectal Cancer Screening**

Colorectal cancer is cancer of colon and rectum, which are located in the lower gastrointestinal tract. Together, they are the third most commonly diagnosed cancer and the second leading cause of cancer death in the United States. According to the American Gastroenterological Association, more than 50,000 Americans will die from colorectal cancer in 2001 and approximately 131,600 new cases will be diagnosed. Nearly 25 percent of the US population is considered at risk because of age or other factors. This cancer can occur in both men and women and is most often found among people who are over the age of 50.

Despite a high prevalence, survival rates for colorectal cancer have been improving over the past 30 years. This improvement in the survival rate is a contribution of earlier diagnosis resulting from improved diagnostic techniques. The American Cancer Society recommends a digital rectal exam annually after age 40, a fecal occult blood test annually after age 50, and a proctoscopy (sigmoidoscopy) every 3-5 years after age 50.

BRFSS respondents were asked if they have ever had a blood stool test and digital rectal or proctoscopic exam. Those who answered “yes” were then asked how long it had been since their last exam. Since questions on blood stool test were not asked in 1993 survey, no results on the blood stool test are shown for the 1993-1995 period. The whole survey module for colorectal cancer screening was not included in the survey questionnaire for 2000. Consequently the 2000 period was also omitted for this report.

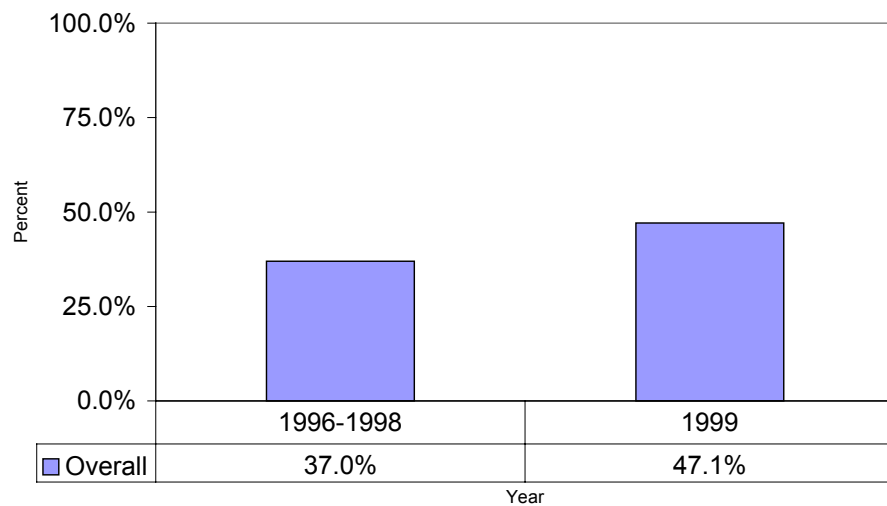
### **Ever had a blood stool test (Fecal occult blood test)**

In 1999, nearly half (47.1%, 95% CI, 42.07% - 52.12%) of the adult aged 50 or more in Lancaster County, indicated they had a fecal occult blood test for the purpose of colorectal cancer screening. Nearly two-thirds (64.5%) of those who had a test had it within the past two years.

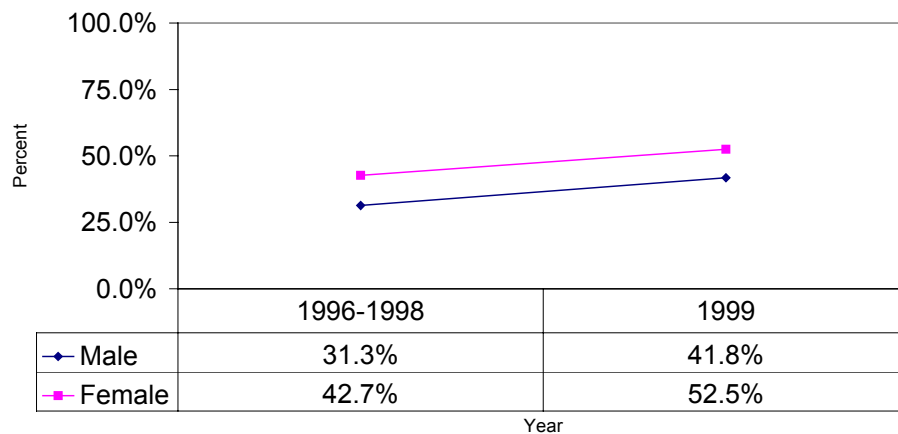
### **Prevalence and Trend**

Respondents who received a fecal occult blood test, increased by 10 percent from the 1996-1998 survey (Fig.97). Thirty-seven percent of respondents in 1996-1998 survey confirmed that they received a blood stool test for colorectal cancer screening. Among those who received the test, 59.3 percent reported that they received the test within the past two years.

**Fig.97: Ever Received Blood Stool Test**

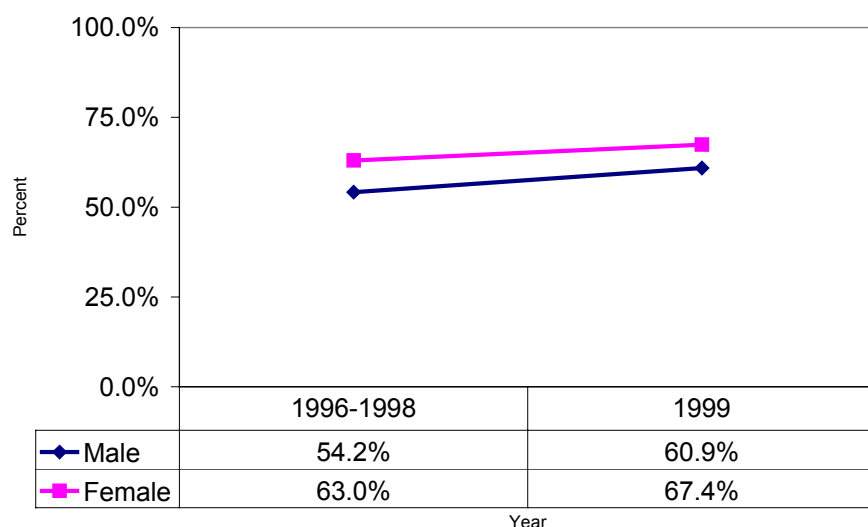


**Fig.98a: Ever Received Blood Stool Test by Gender**



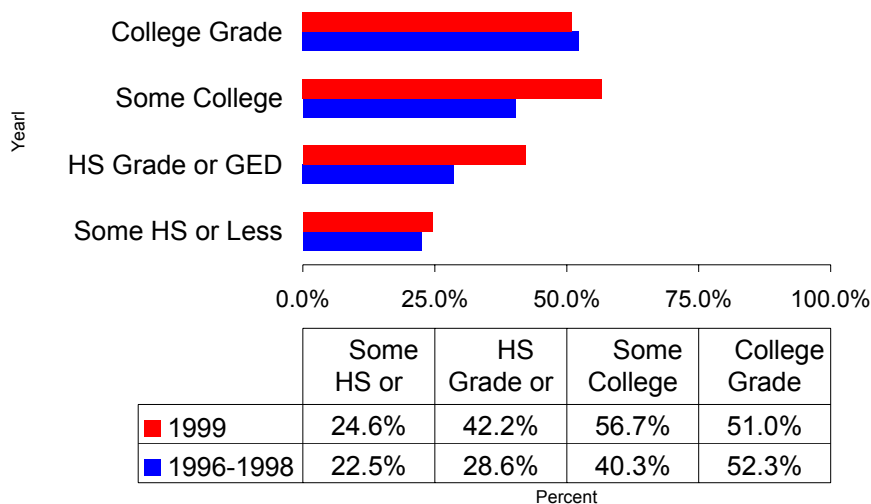
Despite an increase in the prevalence for both men and women since the 1996-1998 period, the proportion of women who had blood stool test outnumbered men by approximately 10 percent both in the 1996-1998 and 1999 surveys. Over fifty percent (52.5%) of women adults aged 50 or more said that they received a blood stool test while 41.8 percent of men adults of the same age reported they receive the test (Fig.98a). Women (67.4%) were also more likely than men (60.9%) to say that they received the test in the past two years (Fig.98b).

**Fig.98b: Received a Blood Stool Test in Past Two Years**



BRFSS Respondents with higher education attainment appeared to be more cautious about colorectal cancer than respondents with lesser educational attainment. Both 1996-1998 and 1999 survey demonstrated higher educational attainment correlated with a higher proportion of ever receiving a blood stool test (Fig.99a).

**Fig.99a: Ever Received a Blood Stool Test by Education**



The data for the 1999 survey revealed notable differences across the income levels of the respondents. More than half of the adults (57.3%) with an income of \$ 35,000-\$ 50,000

reported ever receiving an occult blood test as compared to one-third (31.6%) of adults with an income of less than \$10,000 (Fig.99b).

This pattern, however, was not seen in the 1996-1998 survey period. No trends were observed regarding other demographic variables (Table 30).

**Fig.99b: Ever Received Blood Stool Test by Income**

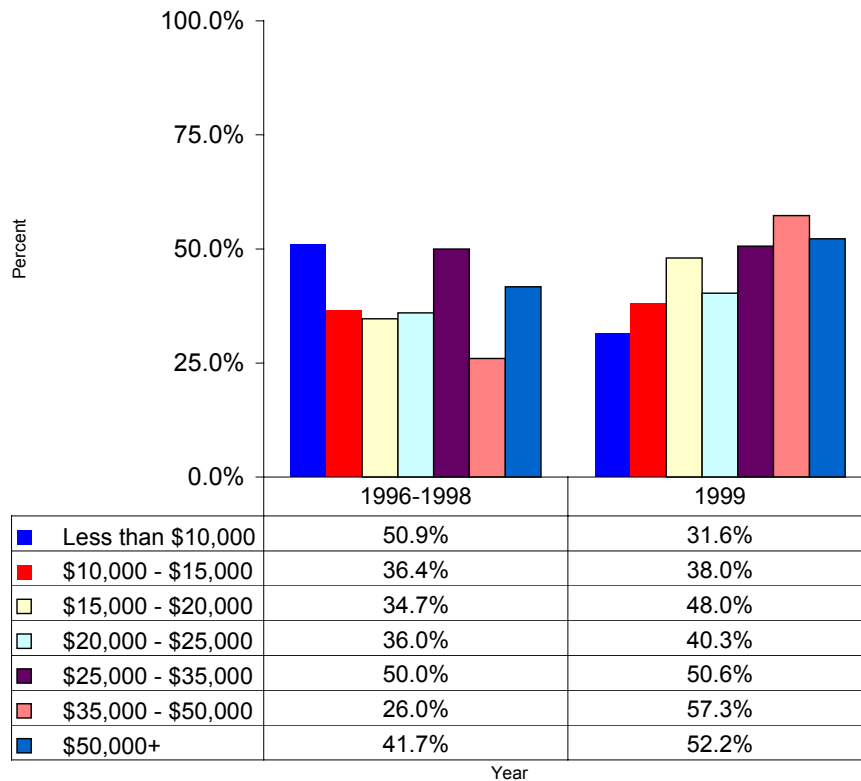


Table 30: Ever Received Blood Stool Test				
Year	1993-1995	1996-1998	1999	2000
<b>Race</b>				
White	N/A	40%	47.8%	N/A
Non-White	N/A	0%	36.2%	N/A
<b>Age Group</b>				
50-59	N/A	21.3%	46.4%	N/A
60-69	N/A	47.4%	51.5%	N/A
70+	N/A	46.7%	44.1%	N/A

### Ever Received Sigmoidoscopy

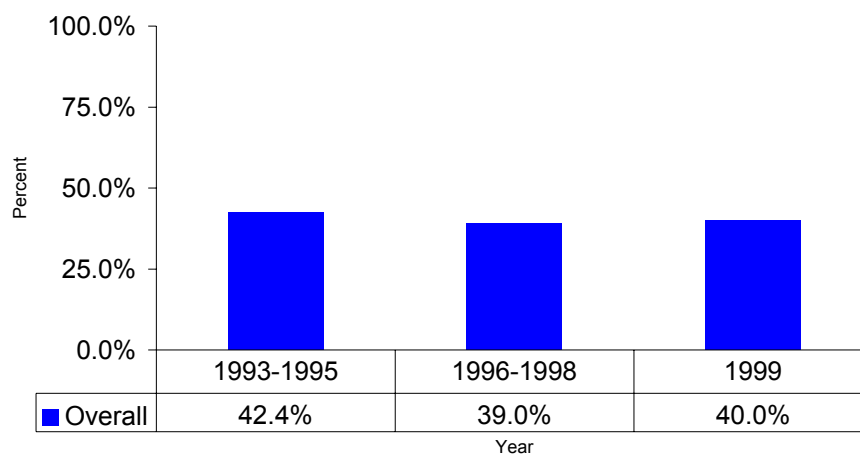
Forty percent (95% CI, 35.1% - 44.9%) of adult aged 50 and older in Lancaster County received their proctoscopy in order to check for cancer and other health problems in

1999. Nearly 64.6 percent of this 40 percent of adults had received the test within the past five years.

### Prevalence and Trend

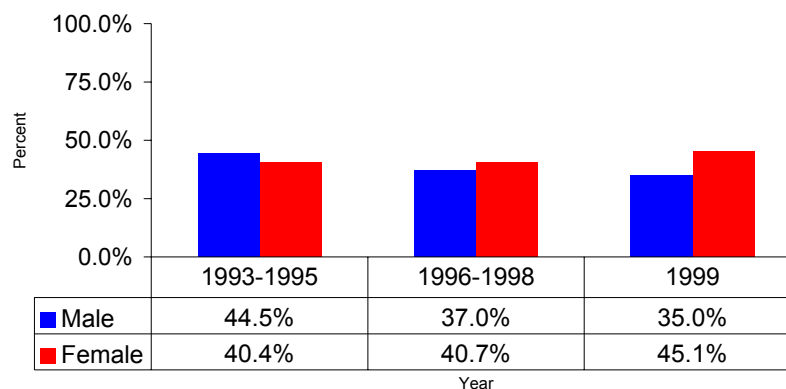
The proportion of respondents who had received a sigmoidoscopy at some time in their lives remained about the same since 1993. The proportion of adults who had this examination was 42.4 percent in the 1993-1995 period and 39 percent in the 1996-1998 period (Fig.100). Of these, 41.3 percent in 1993-1995 and 66.3 percent in 1996-1998 had it within the past five years.

**Fig.100: Ever Received a Sigmoidoscopy**



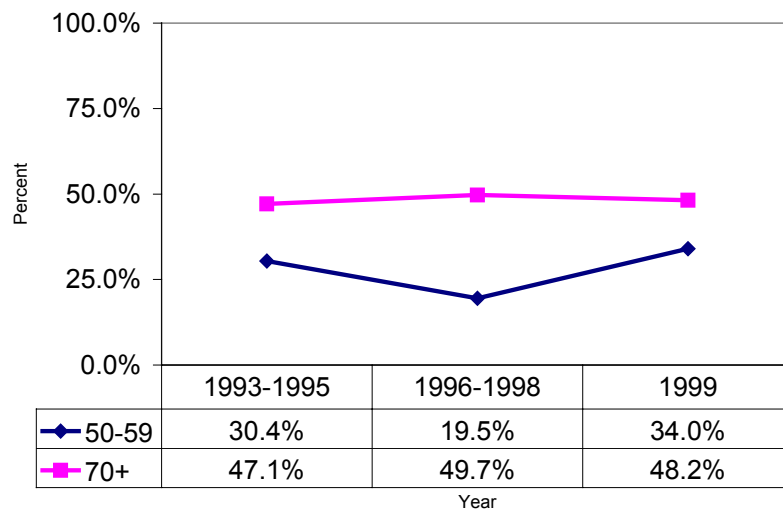
As in the trends for the occult blood test, women were more likely than men to have sigmoidoscopy. Approximately 45 percent of women compared to 35 percent of men reported receiving the test in 1999 to check for cancer and other health problems (Fig.101).

**Fig.101: Ever Received a Sigmoidoscopy by Gender**



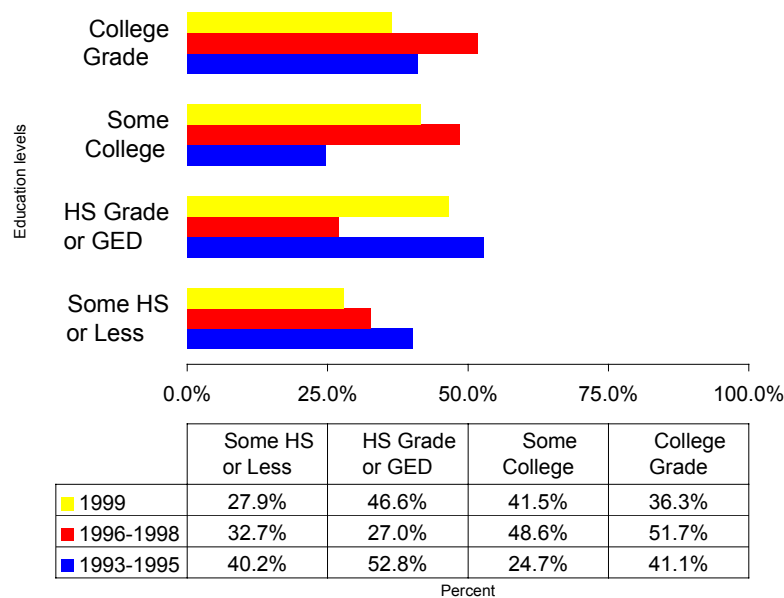
Considerable differences in sigmoidoscopy rates were observed between respondents aged 70 and over and respondents aged 50-59 across the survey years. Approximately 48 percent of adults aged 70 years and older reported to have a sigmoidoscopy compared to 34 percent of adults aged 50-59 years (Fig102).

**Fig.102: Ever Had Sigmoidoscopy by Age Group**



More college graduate adults received a sigmoidoscopy than adults with “some high school education or less.” In 1999, 36.3 percent of respondents with college diplomas reported receiving a sigmoidoscopy, while 27.9 percent of respondents with “some high school education or less” reported receiving the test (Fig.103).

**Fig.103: Ever Received a Sigmoidoscopy by Education**



When race was considered, only 22 percent of non-whites compared to 40.8 percent of the white population received a sigmoidoscopy examination. Sigmoidoscopy rates for whites were consistent across the survey years (Table 31). Variations in prevalence of sigmoidoscopy examination due to income differences did not show any particular trend.

<b>Table 31: Ever Had Sigmoidoscopy Examination</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Annual Household Income</b>				
Less than \$10,000	47.3%	50.9%	23.4%	N/A
\$10,000 - \$15,000	33.8%	14%	42.5%	N/A
\$15,000 - \$20,000	36.8%	45.6%	45.1%	N/A
\$20,000 - \$25,000	63.1%	22.7%	44%	N/A
\$25,000 - \$35,000	42.5%	65.7%	41.7%	N/A
\$35,000 - \$50,000	41.8%	32.9%	50.1%	N/A
\$50,000+	40.7%	55.1%	36.1%	N/A
<b>Race</b>				
White	43.1%	40%	40.8%	N/A
Non-White	0%	8.6%	22%	N/A

## Women's Health

Breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer deaths among women in the United States. It is estimated that one in ten women will develop breast cancer during her lifetime. The risk increases with advancing age. Other risk factors include family and/or personal history of breast cancer, benign breast disease, and hormonal factors, such as early-age menstruation or late-age menopause. Research indicates that death due to breast cancer can be reduced through early detection due to the use of mammograms and clinical breast examinations. The five-year survival rate for breast cancer increases from 75% to 90% for cases diagnosed at an early stage. However, the benefits of breast cancer screening to reduce mortality in the population can only be achieved if screening guidelines are followed and large proportion of women receive screening examinations regularly. The American Cancer Society recommends that all women aged 40 and over have annual mammograms and clinical breast exams. Women between 20 and 39 should have a clinical breast exam every three years. BRFSS survey questions were asked to estimate the Lancaster County specific proportions of women aged 40 and over who reported receiving a mammogram. Each respondent was asked, "Have you ever had a mammogram?" If the answer was "yes" she was then asked, "How long has it been since your last mammogram?" Similar questions were asked about receiving a clinical breast exam.

Cancer of the uterine cervix is one of the more frequently occurring cancers among women. The majority of cervical cancer deaths occur in women 65 years of age and older. However, all women are at risk. Periodic Pap smear tests can effectively detect cervical cancer. Between 1992 and 1995 the number of deaths from cervical cancer declined by 74 percent due to increased use of the Pap smear test by American women. The American Cancer Society recommends annual Pap smear for all women who are, or have been, sexually active or have reached age 18. After three or more annual smears have been normal, Pap smears should be done every three years, unless more frequent testing is recommended by a health care provider. After hearing a description of a pap smear, female BRFSS respondents were asked if they had ever had a pap smear. Those who answered "yes" were then asked how long it had been since their last test.

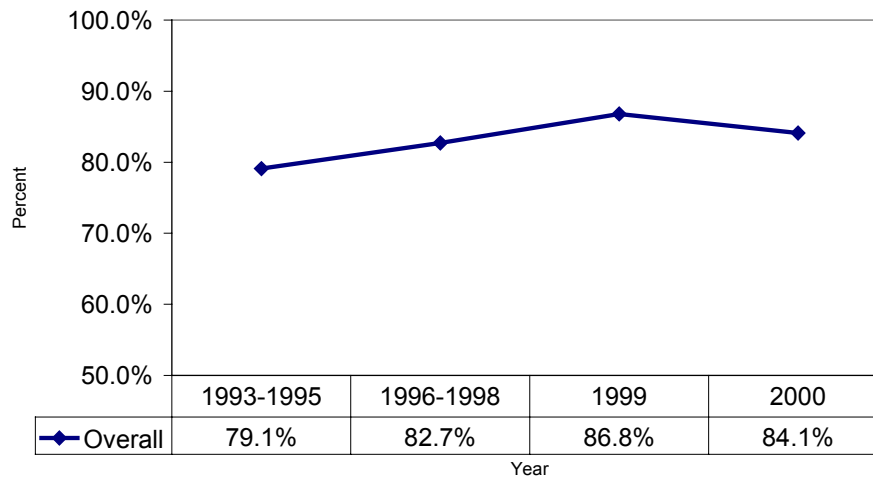
### **Women who ever had a mammogram**

A total of 42,620 (84.1% of 50, 678 women of age 40 and over) adult women in the Lancaster County had gone for a mammogram at some point in their life, according to 2000 BRFSS survey (95% CI, 80.9% - 87.3%). More than 4,000 women (8.6% of 50, 678 women of age 40 and over) of the same age group never had this screening test (95% CI, 6.2% - 11%); 87.6 percent (95% CI, 84.6% - 90.6%) of those who had a mammogram had it within the past two years.

## Mammography Trends

Mammography use among women aged 40 years and older has increased in Lancaster County in recent years. The proportion of women who ever had a mammogram increased from 79 percent in the 1993-1995 to 86.8 percent in 1999. In 2000, it then dropped slightly to 84 percent (Fig.104 a).

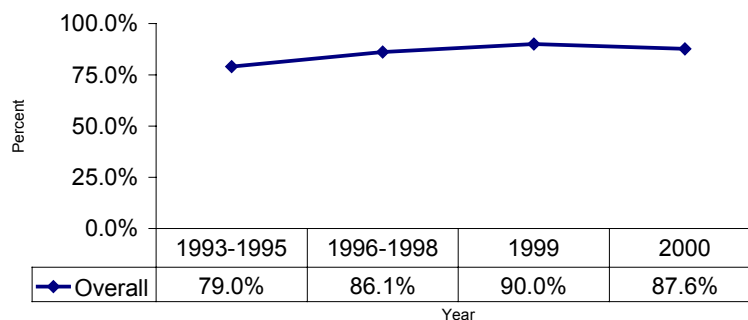
**Fig.104a : Women Who Ever Had a Mammogram**



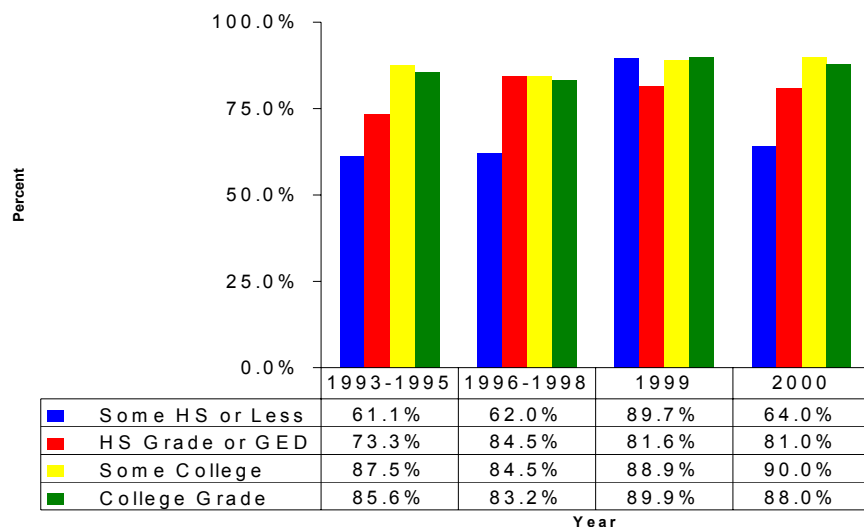
Obtaining a mammogram within the past two years also has increased over the years. The proportions of women who had a mammogram within the in past two years of survey was 79 percent in 1993-1995, 86.1 percent in 1996-1998, and 90 percent in 1999 (Fig.104b).

Women with higher education attainment were more likely to report having a mammogram. According to the 2000 survey, 88 percent of the respondents with a college education reported having a mammogram compared to only 64 percent of respondents with “some high school or less education.” The rate was also lower for high school graduates (81%) compared to respondents with some college education (90%, Fig.105a).

**Fig.104b: Women Who Had Mammogram in Past 2 Years**

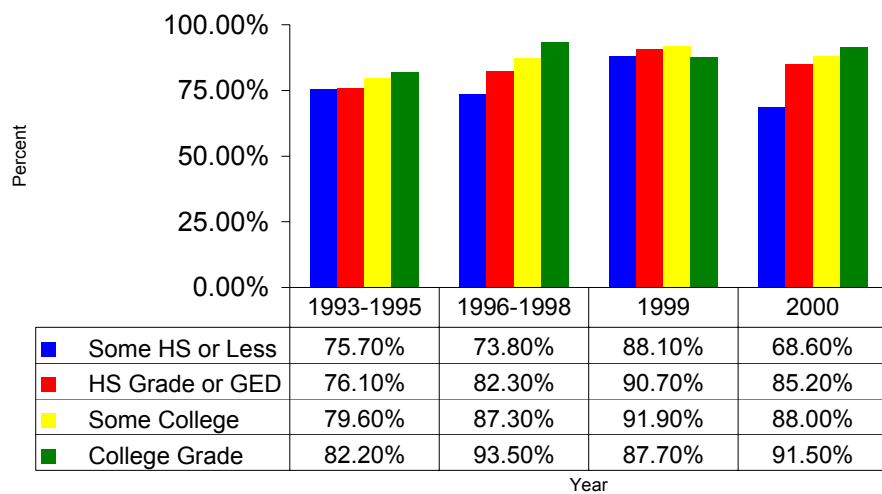


**Fig 105a: Women Who Ever Had a Mammogram by Education**



When asked, “How long back it was done,” a higher proportion of women with better education (91.5%) reported to have had the exam with in the past two-years (Fig.105b).

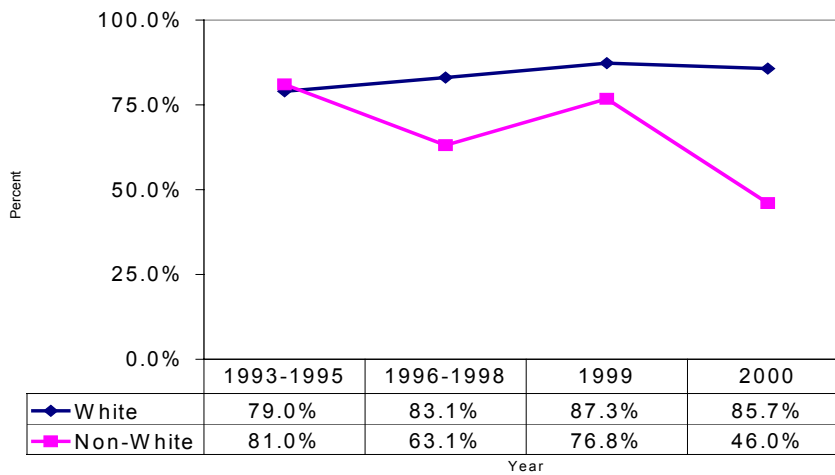
**Fig.105b: Women Who Had a Mammogram in Past Two Years by Education**



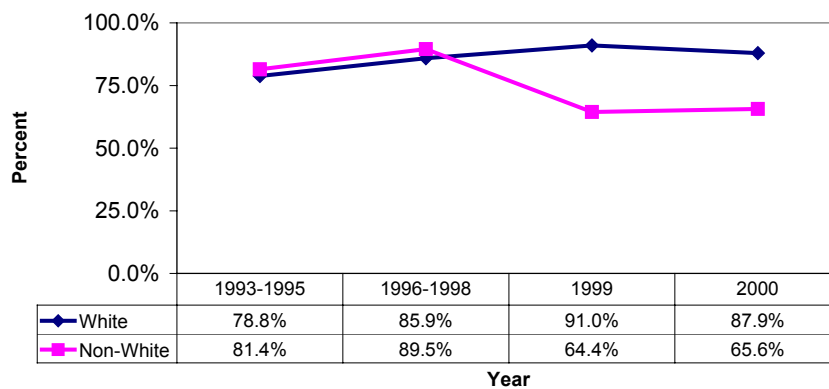
Only 68.6 percent of women “with some high school education” had a mammogram within the past two years compared to 91.5 percent of college graduate women. At the same time, 85.2 percent of high school graduates had had the exam within the past two-years compared to 88 percent of women with some college education.

Non-white adult women were less likely to receive a mammogram than white women. Fig.106a shows the mammogram rates for white and non-white women. In 2000, the proportion of non-white women who ever had a mammogram was almost half (46% vs. 85.7%) that of white women. Non-white women were also less likely than white women to obtain it with in the past two years (Fig.106b)

**Fig.106a: Women Who Ever Had a Mammogram by Race**

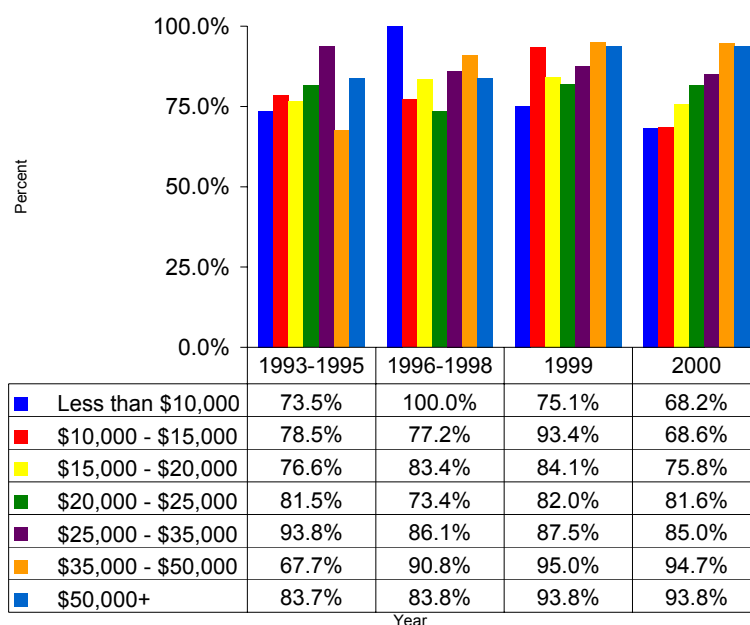


**Fig.106b: Women Who Had Mammogram in Past Two Years by Race**



Higher income was associated with higher rates of mammography. Only 68.2 percent of respondents with an income of less than \$10,000 reported having a mammogram, whereas 93.8 percent of respondents with an income of \$50,000 or more reported never to have received this screening test (Fig.107). No trend was evident due to age differences of the respondents (Table 32).

**Fig.107: Women Who Ever Had a Mammogram by Income**



**Table 32: Women Who Never Had a Mammogram**

Year	1993-1995	1996-1998	1999	2000
<b>Age group</b>				
40-49	74.1%	77.6%	88.9%	83.7%
50-59	84.2%	91.2%	93.7%	89%
60-69	90.7%	90.2%	89.7%	84.6%
70+	73.8%	77.2%	78.2%	79.9%

### Women who ever had a clinical breast exam

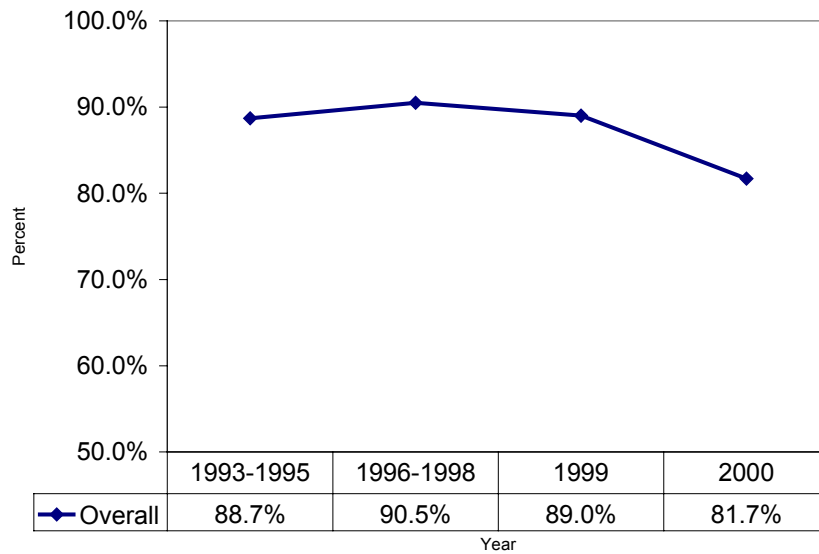
A clinical breast exam (CBE) is an exam in which a doctor, nurse, or other medical professional feels breasts to detect of any type of lumps. About 78,787 women aged 18 and above (81.7% of 96,435 women of age 18 and over) in Lancaster County had a CBE exam (95% CI, 79% - 84.4%), and about 72,2247 women (91.7% of 78,787 women) had the exam with in the past two years (95% CI, 89.6% - 93.8%).

### Prevalence and Trend

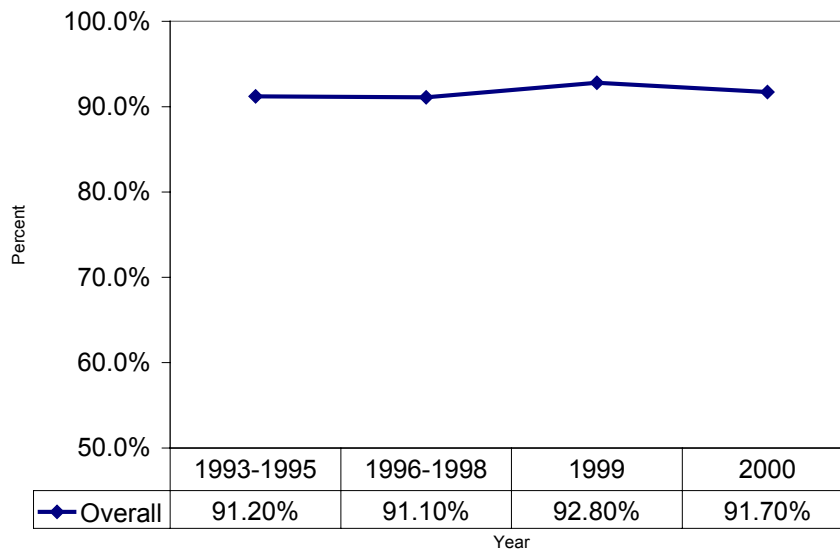
Prevalence of having a CBE appeared to have slightly declined in the 2000 period after remaining somewhat stable over seven years. Rates of having a CBE ranged between 88 and 90 percent from 1993-1995 to the 1999 survey and then dropped to 81.7 percent in 2000 (Fig.108a). However, the proportion of women who had received the exam within

the past two years remained nearly constant over the periods covered in this report (Fig.108b).

**Fig.108a: Women Who Ever Had a CBE**

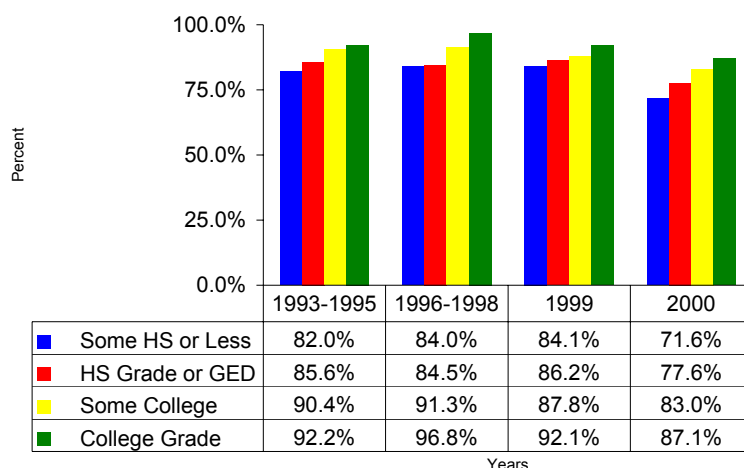


**Fig.108b: Women Who Had CBE in Past Two Years**



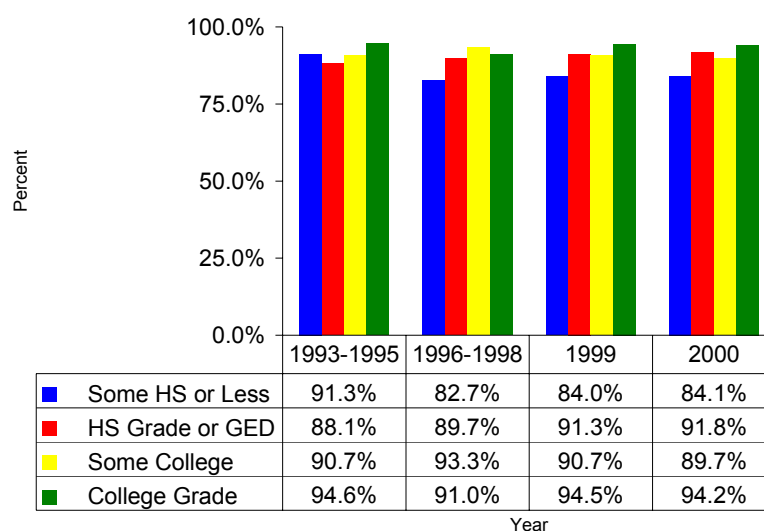
It appears that higher education levels were associated with higher rates of clinical breast examination regardless of survey years (Fig.109a).

**Fig.109a: Women Who Ever Had a CBE by Education**



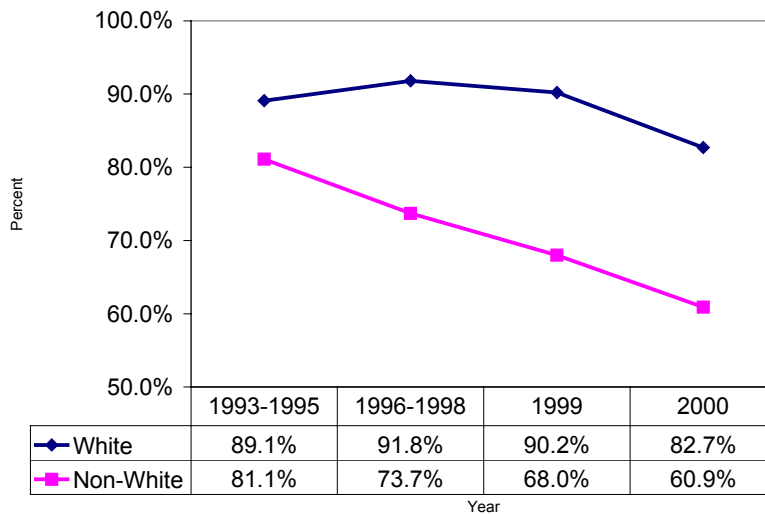
In 2000, 71.6 percent of women who had not finished high school reported to have had the CBE examination. The proportion then grew to 77.6 percent among high school graduates, 83 percent among women with some college education and 87.1 percent among women with a college diploma. College graduate women were also more likely to have a CBE within the past two years than women with lesser educational attainment (Fig.109b). Approximately 84 percent of women with “some or less high school education” said that they had their CBE within the past two years of the survey, while 94.2 percent of women who were college graduates reported having the exam within the past two years.

**Fig.109b: Women Who Had CBE in Past Two Years**



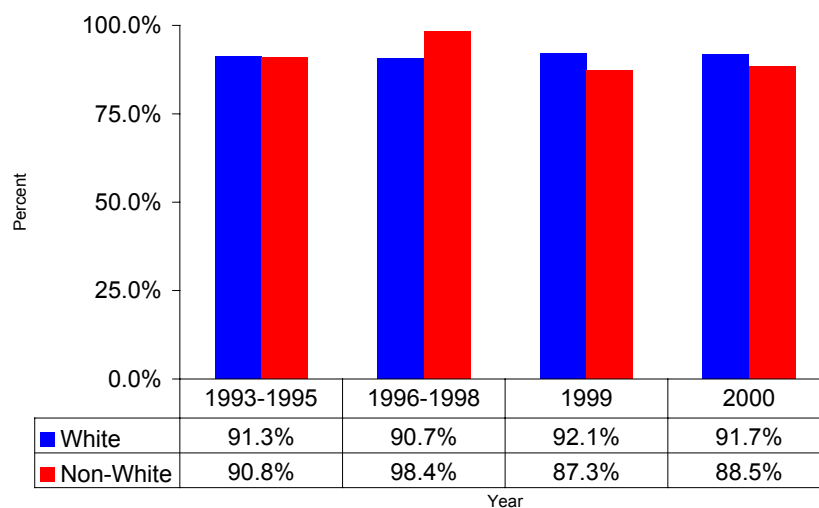
A substantial difference in CBE rates was found between white and non-white women. In Lancaster County, fewer non-white women than white women had a clinical breast examination. Approximately 61 percent of non-white women reported to having had a CBE in the 2000 survey in comparison to 82.7 percent of white women. These big differences could also be traced back to previous survey periods. Since the 1993-1995 survey period, CBE rates for non-white women have declined sharply in contrast to a slight drop in CBE rates for white women (Fig.110a).

**Fig.110a: Women Who Ever Had a CBE by Race**



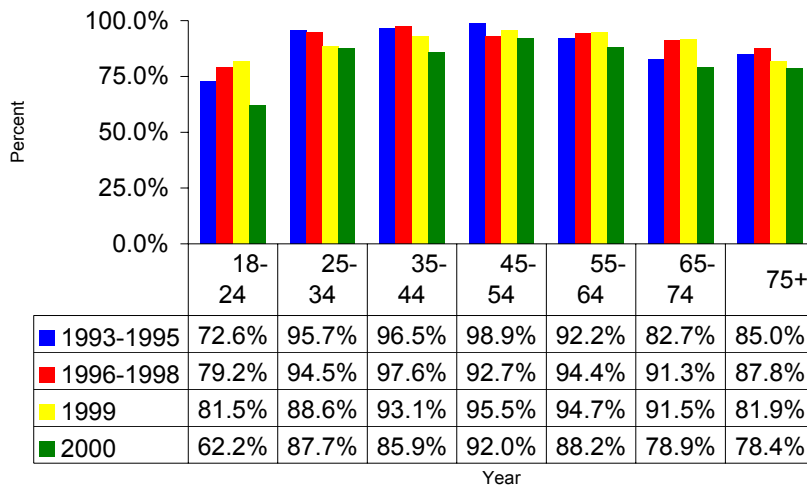
More white women (87.4%) than non-white women (85%) reported to have had a CBE within the past two years (Fig.110b).

**Fig.110b: Women Who Had CBE in Past Two Years**



Women respondents between the ages of 35 and 64 years were the largest segment to report having had a CBE. In 2000, CBE rates were 85.9, 92, and 88.2 percent for age groups of 35-44, 45-54, and 55-64, respectively. Rates were 62.2 percent and 78.4 percent for women who were in the age groups of 18-24 years and 75 and older (Fig.111).

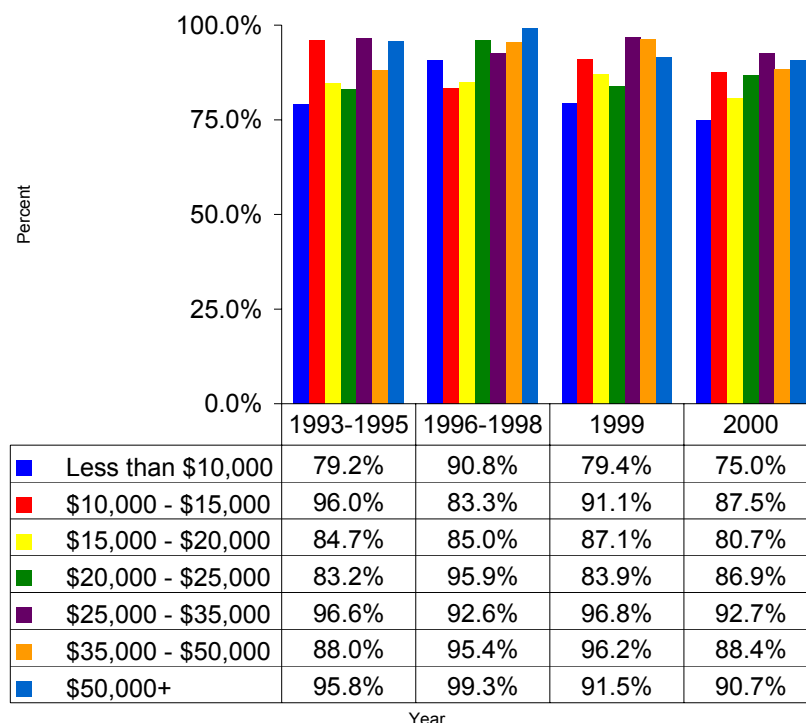
**Fig.111: Women Who Ever Had a CBE by Age**



Women with more income were more likely to report that they have had a CBE. More than 90 percent of women with an income of \$50,000 or more had a CBE, compared with 75 percent of women with an income of less than \$10,000. Year-by-year rates for women within the income brackets is presented in fig.112. Table 33 shows the proportions of women who had their CBE within the past two years prior to the surveys. No particular trend due to income differences was observed.

<b>Table 33: Women Who Had a CBE in Past Two Years</b>				
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Age Group</b>				
18-24	100%	99%	93.1%	98.4%
25-34	95.6%	95.6%	93.5%	95.8%
35-44	89.1%	81.2%	90.1%	90.4%
45-54	86.7%	91.9%	88.1%	92.3%
55-64	95.2%	93%	91%	87%
65-74	81.8%	90.6%	95.6%	87.8%
75+	78.2%	79.5%	91.4%	80.5%

**Fig.112: Women who ever had a CBE by Income**



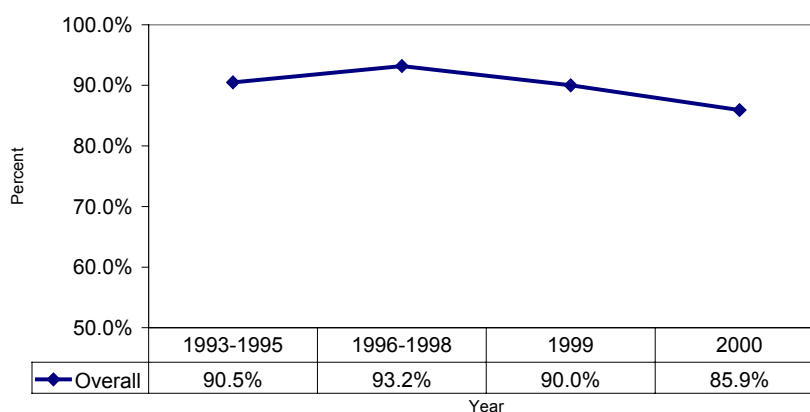
### **Women Who Ever Had a Pap smear**

A Pap smear test is used to detect cervical cancer. In 2000, 85.9 percent (95% CI, 83.5%- 88.3%) of women aged 18 and beyond with an intact uterus (who never had hysterectomy) reported having received a Pap smear test. Among these, 87.5 percent (95% CI, 85% - 90%) had received it with in the past two years.

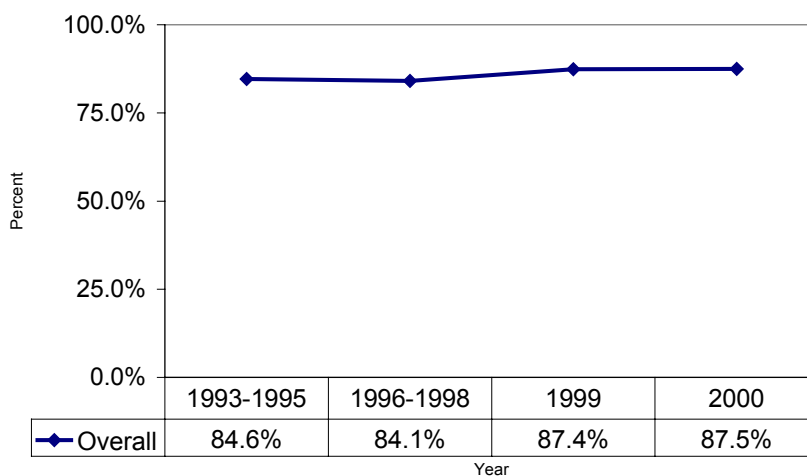
### **Prevalence and Trends**

The proportion of women who had a Pap smear test at some point in their lives, dropped slightly in 2000 (Fig.113), after maintaining somewhat stable rates between the 1993-1995 and 1999 periods. The trend of having a Pap smear test with in the past two years remained steady (Fig.114).

**Fig.113: Women Who Ever Had a Pap Smear Test**



**Fig.114: Women Who Had a Pap Smear in Past Two Years**



Similar to other screening tests for women's health described in this report, considerable differences in the proportions of having had a pap smear test were noted between whites and non-whites. Sixty-nine percent of non-white women in the 2000 period reported getting this test done as compared to 86.8 percent of white women. Despite a downward trend for both groups, overall rates for having a pap smear remained high for whites than non-whites (Fig.115).

**Fig.115: Women Who Ever Had a Pap Test by Race**

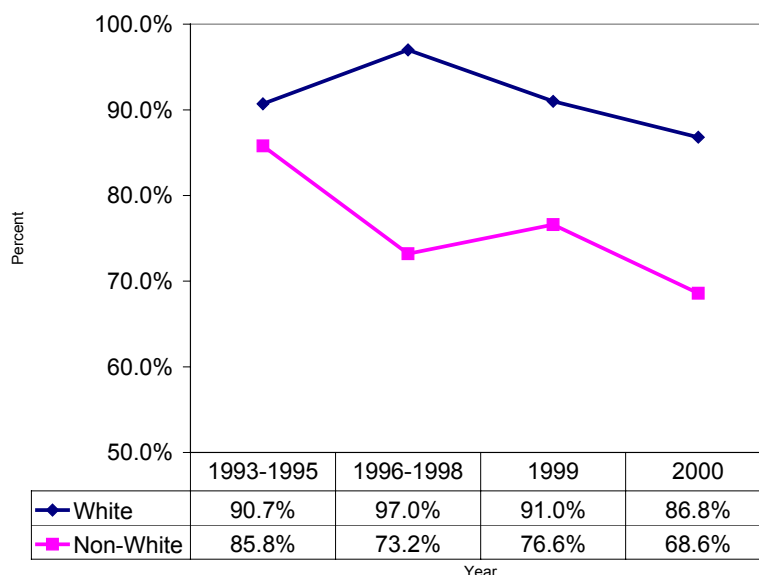
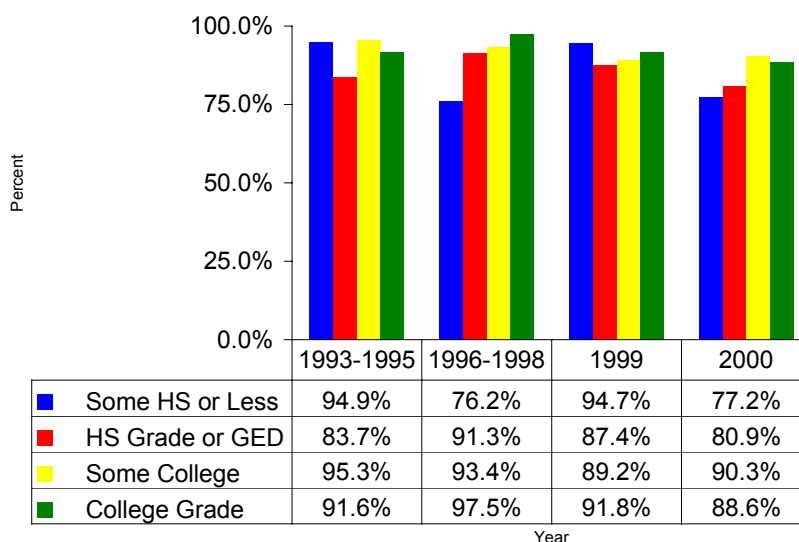
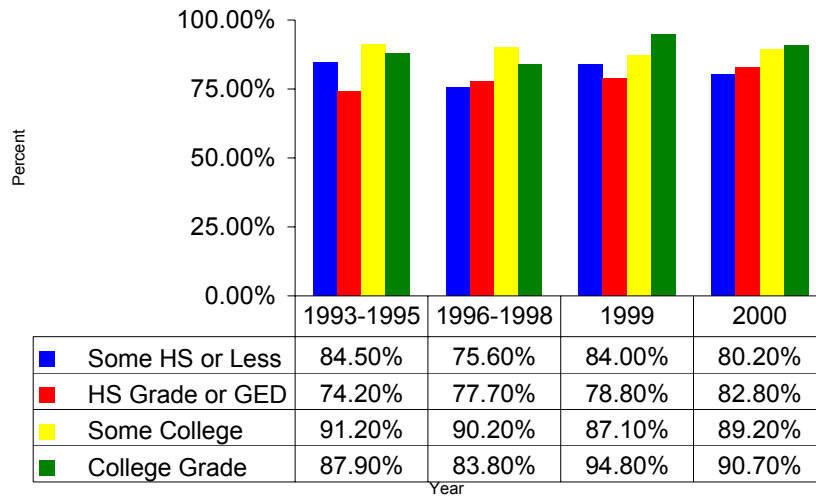


Figure 116a shows the trend of having a Pap smear test by the female respondent's educational attainment. College graduates (88.6%) and women with some college education (90.3%) had higher prevalence of having a Pap test than high school graduates (80.9%) and women with "some or less" high school education (77.2%). Among these women, those who had a college degree had the highest rate (90.7%) of having the test within the past two years followed by women (89.2%) with some college education (Fig.116b).

**Fig.116a: Women Who Ever Had a Pap Test by Education**



**Fig.116b: Women Who Had a Pap Test Within Past Two Years By Education**



Household income and age of the respondent failed to show any apparent trend in having a pap smear test (Table 34a). However, a direct relationship between age and having a pap test in past two years was apparent in all year-specific surveys. Younger adult women were more likely to have the test done within the last two years prior to the survey (Table 32b).

<i>Table: 34a: Women Who Ever Had a Pap Test</i>				
Year	1993-1995	1996-1998	1999	2000
<b>Annual Household Income</b>				
Less than \$10,000	89%	99%	67.1%	83.2%
\$10,000 - \$15,000	96%	78.6%	93.7%	92.2%
\$15,000 - \$20,000	84.7%	95.5%	92.7%	79.3%
\$20,000 - \$25,000	90.7%	94%	79.7%	90.5%
\$25,000 - \$35,000	94.2%	98.6%	97.6%	92.8%
\$35,000 - \$50,000	84.4%	96.4%	95.1%	90.3%
\$50,000+	97.9%	100%	95.6%	93.2%
<b>Age Group</b>				
18-24	79.5%	83.4%	76.6%	73.3%
25-34	93.9%	96.8%	96.6%	93.4%
35-44	96.4%	100%	97.7%	87.8%
45-54	96.7%	98.7%	94.7%	94.1%
55-64	94.3%	97.8%	93.6%	89.7%
65-74	95.4%	95.7%	94.5%	78.9%
75+	83.1%	82.4%	75.9%	79.2%

**Table 34b: Women Who Had Pap Test With in The Past Two Years**

<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>1999</b>	<b>2000</b>
<b>Annual Household Income</b>				
Less than \$10,000	84.4%	88.4%	94.7%	82.4%
\$10,000 - \$15,000	74.2%	79.3%	86.4%	82.5%
\$15,000 - \$20,000	87.7%	86.5%	67.4%	75.3%
\$20,000 - \$25,000	82.7%	83.4%	87.6%	78.2%
\$25,000 - \$35,000	94.3%	85%	90.4%	87%
\$35,000 - \$50,000	90.5%	85.1%	89.1%	89.1%
\$50,000+	88.1%	86.2%	92.9%	93.6%
<b>Age Group</b>				
18-24	100%	99%	97.9%	100%
25-34	92.5%	92.1%	91.7%	97.9%
35-44	91.1%	75.6%	88.3%	92.5%
45-54	86.9%	86.8%	84.1%	85.4%
55-64	70.5%	80%	89.4%	80.2%
65-74	72.9%	68.5%	68.2%	69.9%
75+	50.4%	57%	65.5%	50.4%

## **Physical activity**

Physical inactivity is a term used to identify people who do not get the recommended level of regular physical activity, which is any bodily movement produced by skeletal muscles that results in energy expenditure. Physical activity is one of CDC's leading health indicators. Studies have demonstrated that the more frequent and vigorous the physical activity, the better the health. The U.S. Surgeon General recommends an accumulated 30 minutes of moderate endurance-type physical activity on most, if not all, days of the week to achieve health benefits. Studies have shown that less active, less fit people have double the risk of developing cardiovascular disease, maturity onset diabetes, obesity, and hypertension. Regular physical activity prevents or delays the development of high blood pressure and exercise reduces blood pressure in people with hypertension. Despite increasing evidence of the health benefits of physical activity, the United States remains predominately a sedentary society.

In 1990, nearly 60 percent of the U.S adult population reported little or no leisure-time physical activity. The economic consequences of physical inactivity are enormous. It is felt that a loss of income and productivity occurs when disabling diseases strike. It has been estimated that in 1989 physical inactivity cost the nation \$5.7 billion due to increased hospitalizations and other related health care costs.

To determine physical activity status, BRFSS respondents were asked if they had participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise during the past month. Those who answer "no" to the question were considered physically inactive. Respondents who answered "yes" to the question were further asked about the type of physical activity or exercise they did most of the time.

### **Physical inactivity**

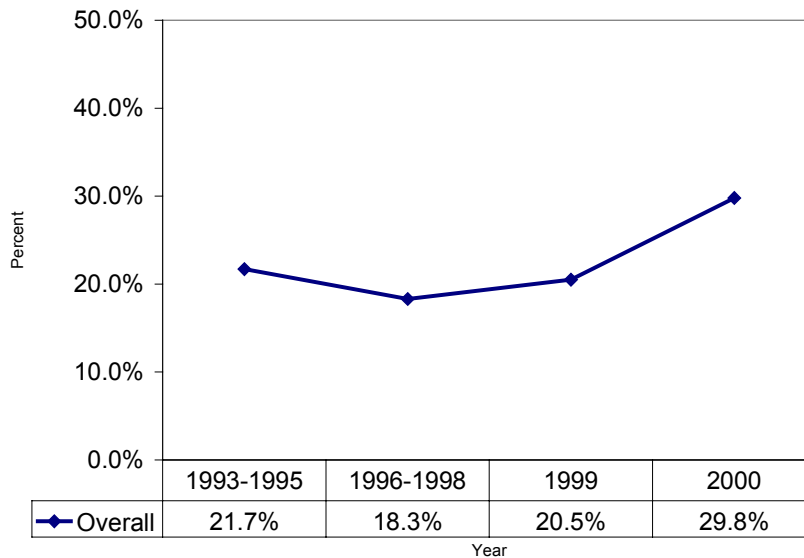
During 2000, about three out of every ten (29.8%, 95% CI, 27.4% - 32.2%) Lancaster County adults aged 18 years and older reported no engagement in physical exercise in the month prior to the survey.

### **Prevalence and trend**

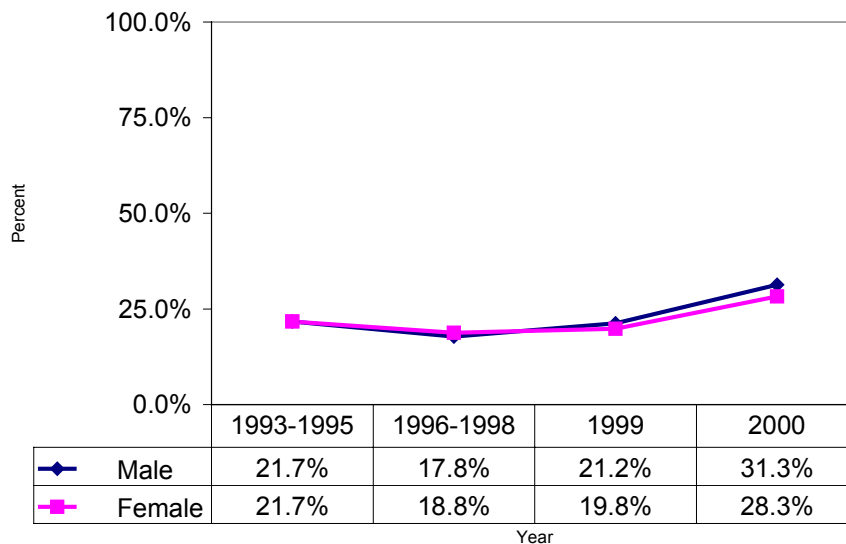
The overall physical inactivity rate in Lancaster County climbed from 21.7 percent in 1993-1995 to 29.8 percent in 2000 (Fig.117).

Across the survey years, prevalence of physical inactivity did not vary much due to the gender of the respondents. Prior to the 2000 survey both men and women were almost equally likely to be physically inactive during the month prior to the survey. In 2000, more men (31.3%) than women (28.3%) reported being physically inactive (Fig.118).

**Fig.117: Trend in Physical Inactivity**

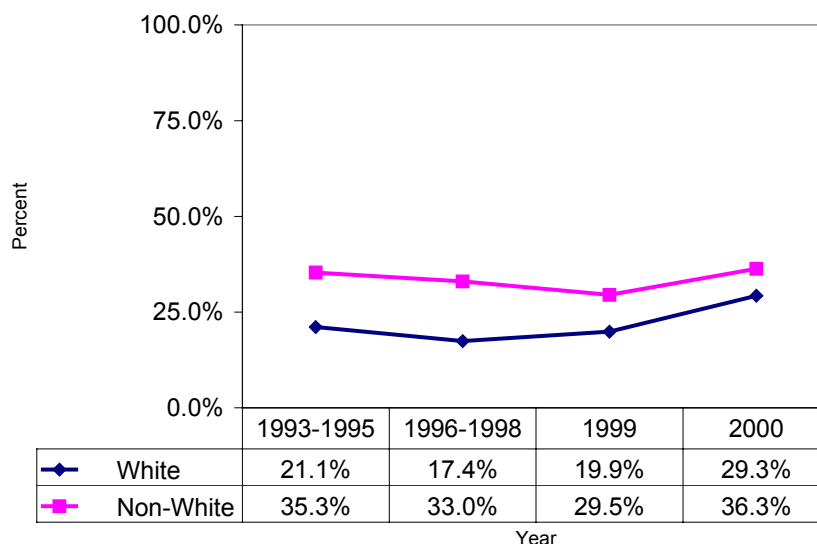


**Fig.118: Trend in Physical Inactivity by Gender**



Non-whites have consistently had a higher physical inactivity rate than whites since the 1993-1995 period (Fig.119). In 2000, 36.6 percent of the non-white respondents, compared to 29.3 percent of the white respondents, reported that they had not participated in any kind of physical activity in the last month.

**Fig.119: Trend in Physical Inactivity by Race**



Increasing age was associated with an increasing number of physically inactive adults in Lancaster County. More than half (54.3%) of the adults belonging in to the age category of 75 years and older did not engage in any kind of physical activity. Similarly, nearly one-fifth of the adults in 18-24 year age group did not engage in physical activities. A sedentary lifestyle was also higher among respondents aged 55-64 years and 65-74 years. A similar correlation between age groups and physical inactivity rates were found in 1993-1995, 1996-1998, and 1999 surveys (Fig.120).

**Fig.120: Trend in Physical Inactivity by Age**

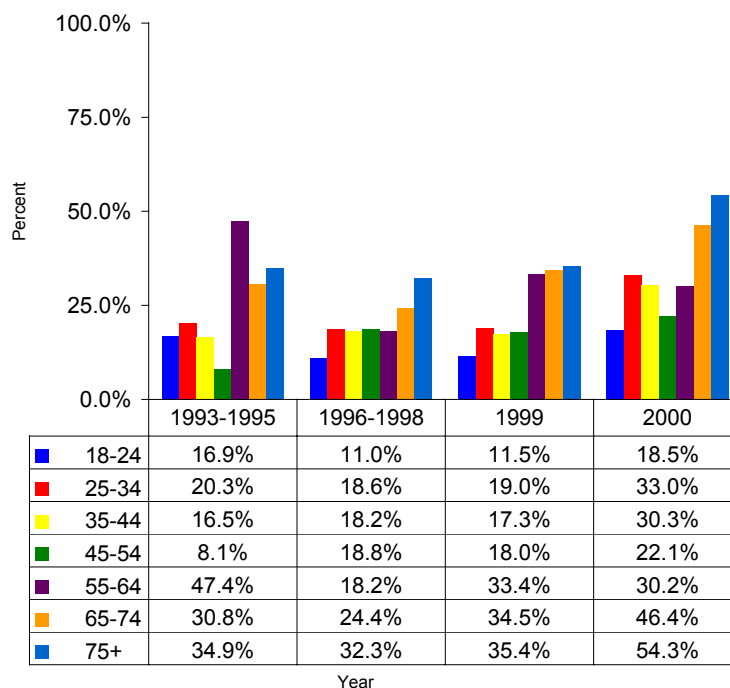
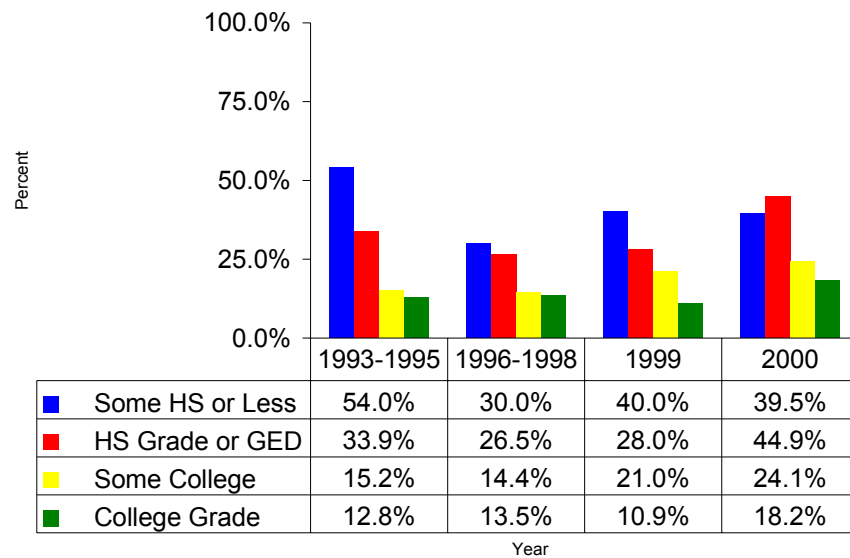


Figure 121 depicts prevalence of physical inactivity rates among the respondents with different levels of education in different survey years. Adults with less educational attainment appear to be less health conscious than adults with more education. According to the 2000 survey, respondents with “some high school or less” education were more than twice (39.5%) as likely to lead a physically inactive month than respondents with a college education (18.2%).

**Fig.121: Trend in Physical Inactivity by Education**



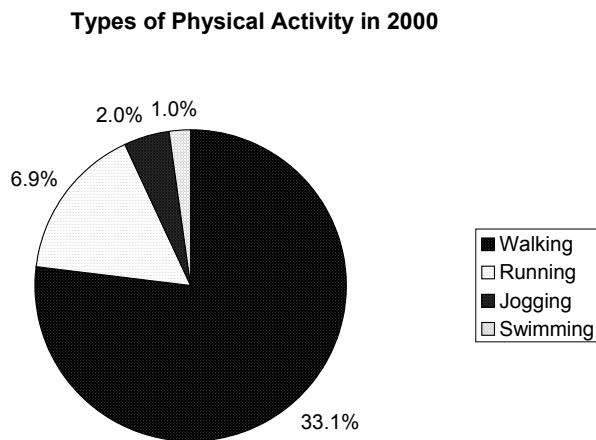
In spite of the considerable differences in the rates between the two extreme income groups (income less than \$10,000 and income more than \$50,000), no apparent physical inactivity trends were observed due to respondent's income (Table 35).

<i>Table 35: Prevalence of Physical Inactivity</i>				
Year	1993-1995	1996-1998	1999	2000
<b>Annual Household Income</b>				
Less than \$10,000	31.6%	4.4%	31.7%	36.6%
\$10,000 - \$15,000	36.6%	16.2%	38.6%	20.1%
\$15,000 - \$20,000	20.6%	27.4%	21.4%	19.3%
\$20,000 - \$25,000	24.8%	32.1%	21.1%	35.7%
\$25,000 - \$35,000	20.3%	25.8%	13.2%	26.8%
\$35,000 - \$50,000	7.6%	16.0%	19.0%	29.7%
\$50,000+	19.8%	10.2%	10.1%	22.0%

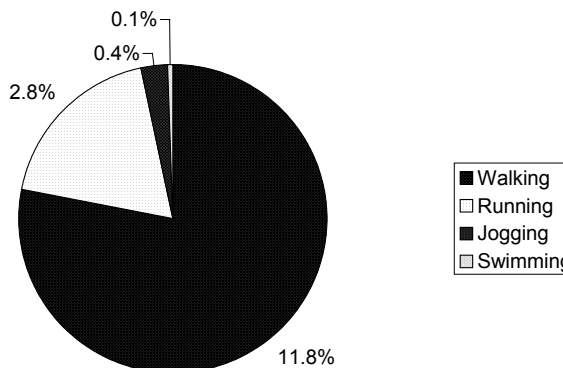
## Types of Physical Activity

BRFSS respondents who reported engaging in physical activity in the past month were asked about the types of physical activity or exercise they did. One-third (33.1%) of them indicated “walking” as the most common activity followed by “running” (6.9%). Approximately 2 percent reported “jogging,” 1 percent reported “swimming,” and the rest indicated other types of activities. “Walking” appeared to be the most widely used type of physical activity regardless of the survey years (Fig.122).

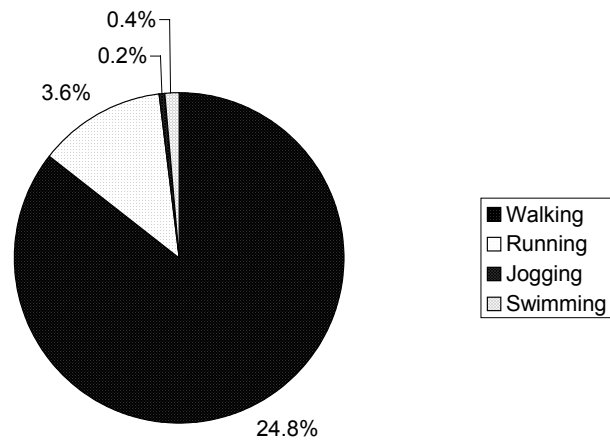
**Fig.122: Types of Physical activity**



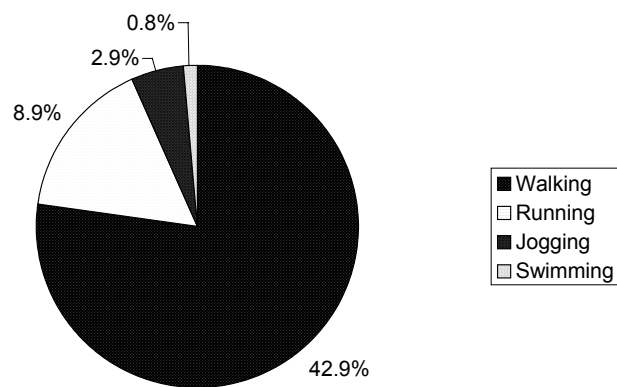
**Types of Physical Activity in 1993-1995**



**Types of Physical Activity in 1996-1998**



**Types of Physical Activity in 1999**



## Weight Control

Health professionals generally agree that adults can benefit from weight loss if they are moderately to severely overweight. They also agree that adults who are overweight, have weight-related medical problems, or a family history of such problems can benefit from weight loss. It is recommended that the overweight population should adopt weight loss regimens in combination with an appropriate balance of diet and physical activity.

BRFSS respondents were asked if they were actively trying to lose weight. Those who responded “yes” were then asked if they were eating fewer calories or less fat or both fewer calories and less fat to lose weight. Questions about weight loss and maintenance were not asked in the 1999 survey.

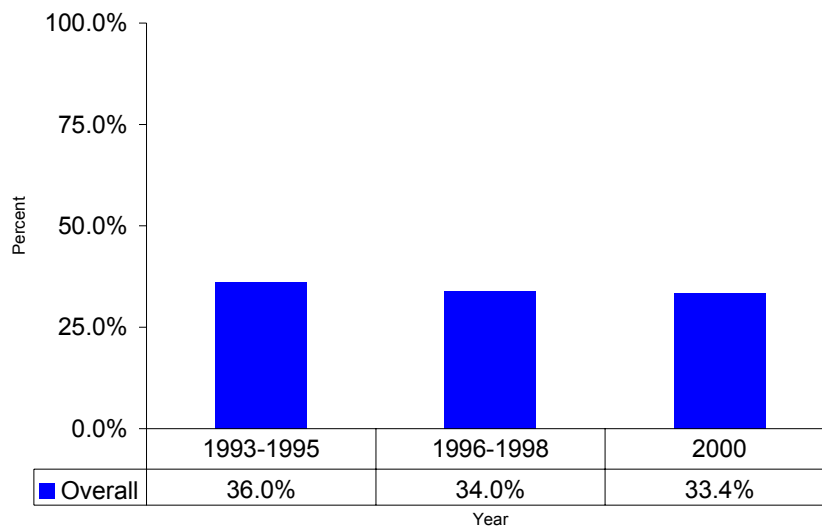
### Trying to lose weight

One-third (33.4%, 95% CI, 30.9% - 35.9%) of adults, aged 18 years and over, reported that they were trying to loose weight in 2000.

### Prevalence and Trend

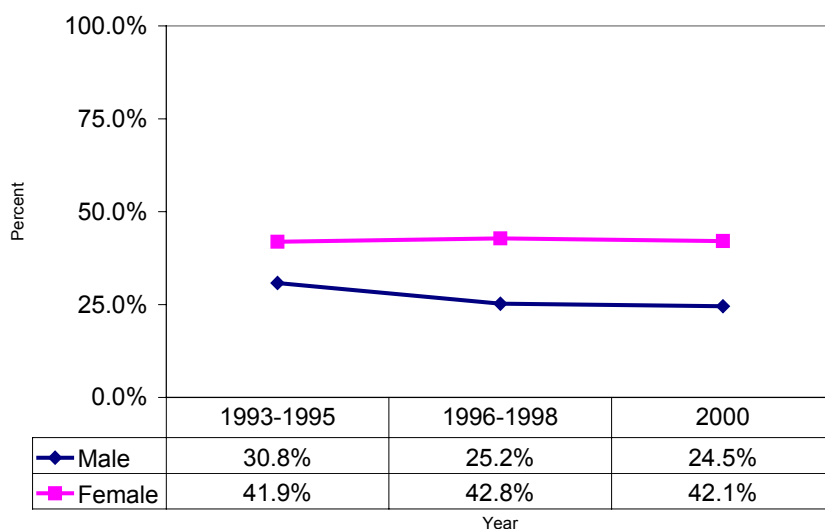
The proportion of adults who were trying to lose weight in Lancaster County remained fairly stable over the periods covered in this report. The rate was 36 percent and 33.7 percent in 1993-1995 and 1996-1998, respectively (Fig.123).

**Fig.123: Trend in "Trying to Lose Weight"**



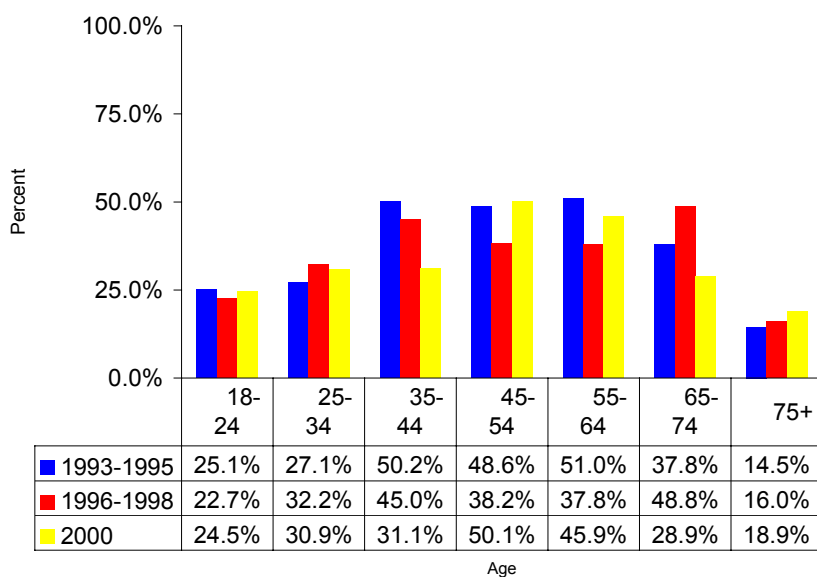
Women’s endeavor to lose weight was considerably higher than men’s. More than 42 percent of women, compared to 24.5 percent men, reported that they were trying to lose weight at the time of survey. The proportion of both men and women who were trying to lose weight did not show any significant change over time (Fig.124).

**Fig.124: Trend in "Trying to Lose Weight by Gender**



Adults between the ages of 35 to 64 year were the largest segment of respondents to report that they were attempting to loose weight (Fig.125). In 2000, half of the adults (50.1%) whose ages were between 45-54 years reported that they were trying to lose weight, followed by 45.9 percent of adults aged 55-64 years and 31.1 percent adults aged 35-44 year.

**Fig.125: Trend in Trying to Lose Weight by Age**



The prevalence of attempting to lose weight by respondent's educational level and household income did not indicate any particular trend (Table 36).

<b>Table 36: Trying to Lose Weight</b>			
<b>Year</b>	<b>1993-1995</b>	<b>1996-1998</b>	<b>2000</b>
<b>Highest Grade Completed</b>			
Some HS or Less	21.4%	28.6%	35.1%
HS Grade or GED	42.1%	32.9%	27.5%
Some College	35.8%	36.1%	36.6%
College Grade	33.9%	33.7%	36%
<b>Annual Household Income</b>			
Less than \$10,000	52.4%	34.8%	26%
\$10,000 - \$15,000	21.3%	29%	32.1%
\$15,000 - \$20,000	29.9%	26.9%	32.6%
\$20,000 - \$25,000	16.4%	30.4%	36.3%
\$25,000 - \$35,000	42.6%	37.2%	30.1%
\$35,000 - \$50,000	34.3%	37.9%	39.5%
\$50,000 +	48.6%	37.4%	36.8%

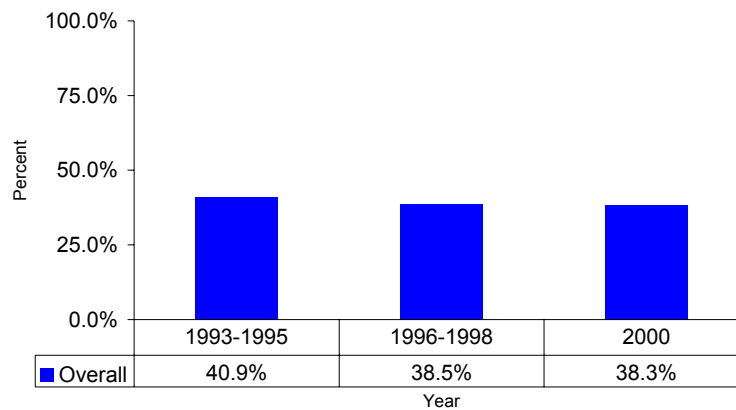
### Eating fewer calories and low-fat

More than 38 percent (95% CI, 35% - 41.6%) of adults aged 18 years and over currently reported that they were eating fewer calories and a low-fat diet.

### Prevalence and Trend

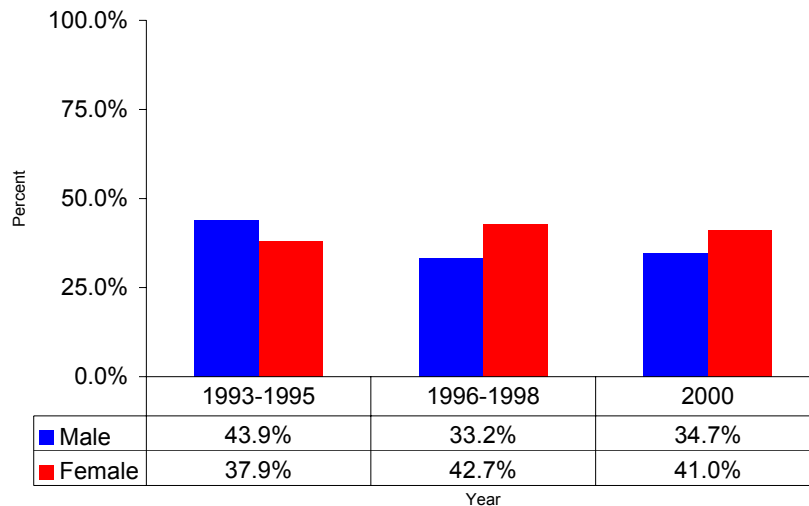
The prevalence of eating fewer calories and a low-fat diet did not significantly change over time. The proportion of adults who were eating such a diet at the time of survey was 40.9 percent and 38.5 percent in 1993-1995 and 1996-1998 respectively (Fig.126).

**Fig 126: Eating Fewer Calories and Low-Fat**



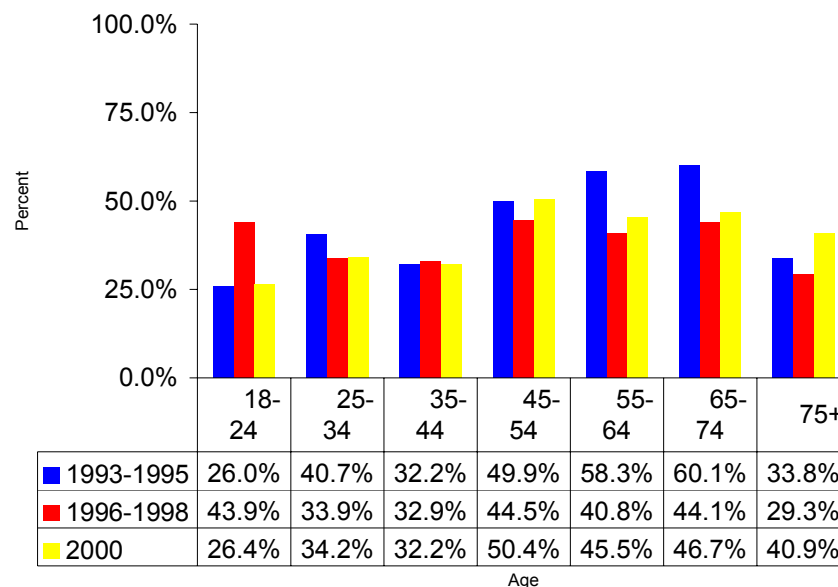
Similar to the trends in those trying to loose weight, women were more likely to say that they were eating fewer calories and low fat-diets than men, except in, the 1993-1995 periods, when the rate for men (43.9%) surpassed the rate for women (37.9%) by 6 percent (Fig.127).

**Fig.127: Eating Fewer Calories and Low-Fat by Gender**



A higher proportion of older adults than younger adults adopted the habit of eating a low-calories and low-fat diet. Across all the years, a greater prevalence of eating such diets was observed high among respondents who fell in to the age category of 45 years and above compared to respondents who fell in to the age category of 18 to 44 years (Fig.128).

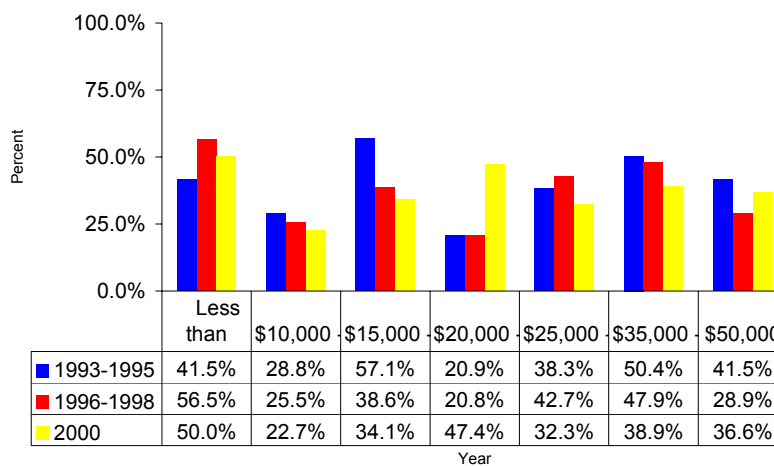
**Fig.128: Trend in Eating Fewer Calories and Low-Fat by Age**



In 2000, half of the adults (50.4%) aged 45-54 years reported such eating habits followed by 45.5 percent of adults aged 55-64 years, 46.7 percent of adults aged 65-74 years, and 40.9 percent of adults aged 75 years and older. In the same year, 26.4 percent of adults aged 18-24 years, 34.2 percent of adults aged 25-34 years, and 32.2 percent of adults aged 35-44 years reported eating fewer calories and a low-fat diet.

Respondents with annual incomes of less than \$10,000 were more likely (50%) than those with incomes over \$50,000 (36.6%) per year to say they were eating fewer calories and a low-fat (Fig.129).

**Fig.129: Trend in Eating Fewer Calories and Low-Fat by Income**



No apparent trend was demonstrated according to the respondent's educational attainment (Table 37).

Table 37: Eating Fewer Calories and Low Fat			
Year	1993-1995	1996-1998	2000
<b>Highest Grade Completed</b>			
Some HS or Less	39.3%	16.5%	42.4%
HS Grade or GED	40.3%	34.8%	39%
Some College	43.1%	48.9%	37.6%
College Grade	39%	33%	38.3%